



Munich local division

UPC_CFI_465/2025

UPC_CFI_1121/2025

Decision
of the Court of First Instance of the Unified Patent Court,
Munich local division
issued on 15 September 2026

CLAIMANT AND COUNTER-DEFENDANT

DivX, LLC, represented by its Chief Executive Officer Noel Egnatios, 1-1-1, 4350 La Jolla Village Dr Suite 950, San Diego, California 92122, United States of America,

represented by:

Peter Michael Weisse and Jasper Meyer zu Riemsloh of the law firm Wildanger Kehrwald Graf von Schwerin & Partner mbB Attorneys-at-law, Couvenstraße 8, 40211 Düsseldorf,

Jochen Ehlers and Dr Karin Rosahl of the law firm Eisenführ Speiser Patentanwälte Attorneys-at-law PartGmbH, Johannes-Brahms-Platz 1, 20355 Hamburg.

DEFENDANTS AND COUNTER-CLAIMANTS

1. **Netflix Services Germany GmbH**, Aaron-Bernstein-Platz 2, 10117 Berlin, represented by its legal representatives,
2. **Netflix International B.V.**, Karperstraat 8–10, 1075 KZ Amsterdam, Netherlands, represented by its legal representatives,
3. **Netflix Services Italy S.R.L.**, Via Boncompagni no. 8–10, Villino Rattazzi 00187 Rome, Italian Republic, represented by its legal representatives,

4. **Netflix Services France S.A.S.**, 11 Place Edouard VII, 75009 Paris, French Republic, represented by its authorised representatives,

5. **Netflix Inc.**, 121 Albright Way, Los Gatos, California 95032, United States of America, represented by its authorised representatives,

Registered Agent: c/o The Corporation Trust Company, 1209 Orange Street, Wilmington, Delaware 19801, United States of America,

represented by: Dr Marcus Grosch, Dr Jan Axtmann, Paul Lehmann and Felix Hartisch of the law firm Quinn Emanuel Urquhart & Sullivan, LLP, Hermann-Sack-Straße 3, 80331 Munich.

PATENT AT ISSUE

European patent with unitary effect No. EP 4 213 033

PANEL/CHAMBER

Second Panel of the Munich local division

JUDGES INVOLVED

This decision was issued by the presiding judge Dr Daniel Voß (judge-rapporteur), the legally qualified judge Dr Georg Werner, the legally qualified judge Dr Tatyana Zhilova and the technically qualified judge Dr Torsten Duhme.

LANGUAGE OF THE PROCEEDINGS

German

SUBJECT MATTER OF THE PROCEEDINGS

Action for infringement and counterclaim for revocation

ORAL HEARING

21 July 2026

FACTS

- 1 The claimant is bringing proceedings against the defendants on the grounds of an alleged infringement of the European patent with unitary effect EP 4 213 033 (submitted as Annex WKS 4; hereinafter: the patent at issue). The defendants have brought a counterclaim for the revocation of the patent at issue.
- 2 The claimant is the registered owner of the patent at issue and has sole authority to dispose of it; the patent was filed on 7 January 2008, claiming the priority of the two patent applications US 88365907 P and US 883659 P dated 5 January 2007. The patent at issue stems from the fourth divisional application of the European parent application EP 2 122 482, which in turn arose from the international application PCT/US2008/050440 with publication number WO 2008/086313 A1 (submitted as Annex QE 2). The divisional application (the original application submitted as Annex QE 1) was published on 19 July 2023, and the notice of grant was issued on 7 May 2025. The patent at issue is in force in the contracting member states of the Unified Patent Court ('UPC').
- 3 The patent at issue, the language of the proceedings for which is English, is entitled 'Video distribution system with progressive playback'. The sole independent claim 1 of the patent at issue relates to a method for the progressive playback of a media sequence and reads as follows:

"A method of progressively playing back, by a client, a media sequence stored as a media file on a remote server (12), wherein the media file includes an index,

the method comprising the following steps performed by the client: obtaining (42) the index from the remote server;

identifying (44) a starting location within the media sequence;

identifying (46), using the index, byte ranges of the media file corresponding to the media required to play the media sequence from the starting location;

placing the identified byte ranges in a request queue;

requesting (46) the byte ranges from the request queue that are required to play the media sequence from the starting location;

buffering the received bytes of information pending the start of playback; and

playing back (48) the buffered bytes of information;

wherein the method also comprises the following steps performed by the client, upon receiving (50) a user instruction:

identifying (54), using the index, byte ranges of the media file corresponding to the media required to play the media sequence in accordance with the user instruction;

flushing (110) the request queue;

establishing a request queue using the byte ranges identified in response to the user instruction; and

requesting (46) the byte ranges from the request queue that are required to play the media in accordance with the user instruction,

wherein the method further comprises the following steps performed by the client:

maintaining a mask indicating the portions of the media file that have been downloaded;

identifying, using the mask, whether at least a portion of a byte range required to play the media in accordance with the user's instruction has already been downloaded;

placing in the request queue only those portions of byte ranges that have not already been downloaded from the remote server to play the media in accordance with the user's instruction; and

requesting (46) the byte ranges from the request queue."

- 4 With regard to the further sub-claims challenged in the counterclaim for revocation, reference is made to the patent specification.
- 5 In its action for infringement, the claimant alleges indirect infringement of claim 1 of the patent at issue. The German translation of this claim reads as follows:

"A method for the progressive playback by a client of a media sequence stored as a media file on a remote server (12), the media file comprising an index, the method comprising the following steps carried out by the client:

receiving (42) the index from the remote server; determining

(44) a starting point within the media sequence;

determining (46), using the index, byte ranges of the media file corresponding to media required to play the media sequence from the starting point;

Placing the determined byte ranges into a request queue;

Requesting (46) the byte ranges from the request queue that are required to play the media sequence from the starting point;

buffering received bytes of information until playback begins; and playing back (48) the buffered bytes of information;

wherein the method also comprises the following steps, which are performed by the client upon receipt (50) of a user instruction:

determining (54), using the index, byte ranges of the media file that correspond to media required to play the media sequence in accordance with the user instruction;

clearing (110) the request queue;

setting up a request queue using the byte ranges identified in response to the user instruction; and

requesting (46) the byte ranges from the request queue that are required to play the media in accordance with the user instruction,

wherein the method further comprises the following steps performed by the client:

maintaining a mask indicating the parts of the media file that have been downloaded;

determining, using the mask, whether at least a portion of a byte range required to play the media in accordance with the user's instruction has already been downloaded;

Placing in the request queue only those parts of byte ranges that have not already been downloaded from the remote server, in order to play the media in accordance with the user's instructions; and

Requesting (46) the byte ranges from the request queue."

- 6 Defendant 5) is a US media company engaged in the paid streaming and production of films and television series. Defendants 1) to 4) are subsidiaries of Defendant 5) (hereinafter collectively referred to as 'Netflix' or the 'Netflix Group').
- 7 In order to stream and watch the films offered by Netflix via the internet, and thus to use the Netflix service, specialised software is required (hereinafter 'Netflix software'), which comprises, amongst other things, the 'Cadmium Player' integrated into the software and the user interface. In its action for infringement, the Claimant is challenging this Netflix software (the contested embodiment).
- 8 According to the extracts from the website www.netflix.com submitted as Annex WKS 7, the operator of the Netflix service for all UPC member states is the second defendant. The contractual partners of the customers are the first defendant for the Federal Republic of Germany, the third defendant for Italy, the fourth defendant for France and the second defendant for all other UPC member states. The use of the Cadmium Player by Netflix customers requires them to have concluded a corresponding contract with the first, third or 4).
- 9 Once Netflix customers have logged into the Netflix portal on the website www.netflix.com, the Netflix software is automatically downloaded to the customer's device. Alternatively, if a mobile device running the Android or iOS operating system is used, the Netflix software can also be downloaded from an app store. Defendant No. 5) appears, as evidenced by the relevant screenshots submitted as

set of exhibits WKS 8, appears in the Apple Store and the Google Play Store as the provider of the Netflix app.

APPLICATIONS

10 In the infringement proceedings, the claimant seeks

I. that the defendants be ordered

1. to refrain

within the territory of the Kingdom of Belgium, the Republic of Bulgaria, the Kingdom of Denmark, the Federal Republic of Germany, the Republic of Estonia, the Republic of Finland, the French Republic, the Italian Republic, the Republic of Latvia, the Republic of Lithuania, the Grand Duchy of Luxembourg, the Republic of Malta, the Kingdom of the Netherlands, the Republic of Austria, the Portuguese Republic, the Republic of Romania, the Kingdom of Sweden and the Republic of Slovenia, or to provide third parties with

means (software) for a client to carry out a method for the progressive playback of a media sequence stored as a media file on a remote server, wherein the media file contains an index, wherein the method comprises the following steps carried out by the client:

receiving the index from the remote server; determining a starting point within the media sequence; determining, using the index, byte ranges of the media file corresponding to media required to play the media sequence from the starting point; placing the identified byte ranges into a request queue; requesting, from the request queue, the byte ranges required to play the media sequence from the start point; buffering received bytes of information until playback begins; and playing back the buffered bytes of information;

wherein the method also comprises the following steps, performed by the client upon receipt of a user instruction: determining, using the index, byte ranges of the media file corresponding to the media required to play the media sequence in accordance with the user instruction; clearing the request queue; setting up a request queue using the byte ranges identified in response to the user instruction; and requesting the byte ranges from the request queue that are required to play the media in accordance with the user instruction,

wherein the method further comprises the following steps performed by the client:

maintaining a mask indicating the parts of the media file that have been downloaded;

determining, using the mask, whether at least a portion of a byte range required to play the media in accordance with the user's instruction has already been downloaded;

placing in the request queue only those parts of byte ranges that have not already been downloaded from the remote server, in order to play the media in accordance with the user's instructions;

and requesting the byte ranges from the request queue;

to be delivered or offered for use within the territory of the aforementioned contracting member states;

(indirect infringement of claim 1)

2. to provide the claimant with information, in a statement structured for each month of the calendar year, regarding the extent to which they (the defendants) have committed the acts described in Section I.1 since 7 May 2025, specifying

- a) the origin and distribution channels of the said software, and
 - (i) the names and addresses of the developers, distributors and other previous owners, and
 - (ii) the names and addresses of the commercial customers and the points of sale for which the software was intended,
- b) the quantities downloaded, pre-installed or obtained or ordered by accessing a website, and the prices paid for the software in question,
- c) the identity of all persons involved in the application of the procedures referred to in Section I.1,

whereby, as evidence of the information provided, copies of the relevant purchase documents (namely invoices, or alternatively delivery notes) must be submitted; details requiring confidentiality may be redacted from the data subject to disclosure; and the information, together with the purchase documents, must in any event also be provided in a computer-readable, electronic format;

3. to provide the Claimant, as evidence of the information provided in accordance with Section I.2. plus details of the profit made, with a breakdown of the extent to which they (the defendants) have carried out the acts described in Section I.1. since 7 May 2025, specifying
 - a) the individual downloads or page views, broken down by download volumes and number of page views, as well as times, prices and version designations, and the names and addresses of the customers,
 - b) the individual offers, broken down by offer quantities, times, prices and type designations, as well as the names and addresses of the recipients of the offers,
 - c) the advertising carried out, broken down by advertising medium, circulation figures, distribution period and distribution area, and, in the case of online advertising, the website addresses, the periods of placement and the number of visits,
 - d) the production costs, broken down by individual cost factors, and the profit realised,

whereby the statement containing the accounting data must be submitted at least in an electronic format that can be processed by computer,

whereby, in order to substantiate the information, copies of the relevant purchase documents (namely invoices or, alternatively, delivery notes) must be submitted, with details requiring confidentiality being redacted from the data subject to disclosure,

whereby the defendants reserve the right, at their discretion, to disclose the names and addresses of non-commercial customers and recipients of quotations, instead of to the Claimant, to a chartered accountant designated by the Claimant who is bound by a duty of confidentiality, provided that the defendants bear the costs thereof and authorise and oblige him to inform the Claimant, upon specific request, whether a particular delivery or a particular customer or recipient of an offer is included in the list;

- II. to declare that the defendants are obliged to compensate the Claimant for all damage suffered by her as a result of the acts referred to in paragraph I.1, committed since 7 May 2025 and which may yet be incurred;

- III. to issue an order for the immediate enforcement of the judgment;

in the alternative, in the event that the enforcement of the decision is made conditional upon the provision of security, to set partial security, with the following amounts being proposed:

Claim under I.1.	Defendant 1)	EUR 1,000,000
	Defendant 2)	EUR 1,000,000
Claims under I.2. and I.3.	Defendant 1)	EUR 25,000
	Defendant 2)	EUR 25,000
Order on costs	Amount enforced in each case	

in the further alternative, to allow the Claimant to avert enforcement in respect of the costs by providing security;

IV. to order the defendants,

1. in so far as they do not fully comply with the orders set out in paragraph I.1. following service of the order, to pay a recurring penalty payment of at least EUR 100,000 to the court for each day of delay;
2. in so far as they do not fully comply with the orders set out in paragraphs I.2. and I.3. within three weeks of service of the decision, to pay a recurring penalty of at least EUR 1,000 to the court for each day of delay;

in the alternative, in the event that enforcement of the decision is made conditional upon the provision of security, to make the penalty payments to be determined in accordance with paragraph IV. conditional upon the Claimant providing evidence of having provided such security;

V. order the defendants to bear the costs of the proceedings.

11 The defendants request that

1. that the claim be dismissed;
2. that the costs of the proceedings be borne by the

Claimant; in the alternative, in the event that the claim is not

dismissed in its entirety:

3. that enforcement of the decision be made conditional upon the Claimant providing security in the amount of at least EUR 3,371.000.00, whereby the security may be provided in the form of a deposit with the Unified Patent Court or with an authority within the EU competent for such deposits, or in the form of a bank guarantee governed by the law of an EU Member State and issued by a bank authorised to conduct business within the EU.

12 By way of the counterclaim for a declaration of invalidity, the defendants seek

1. that the European patent EP 4 213 033 be declared invalid in its entirety;
2. that the costs of the proceedings be borne by the Claimant.

13 The claimant requests that

- I. that the counterclaim for revocation be dismissed;
- II. that the costs of the proceedings be borne by the defendants in the counterclaim for revocation;

in the alternative, should the local division not grant the main claim, to file an application for amendment of the patent pursuant to Article 65 of the UPC Agreement in conjunction with Rule 30.1 of the RoP,

- I. to maintain the patent in suit in a limited form on the basis of the attached sets of claims in accordance with auxiliary claims 1–6 (in the order specified), as set out in the bundle of annexes WKS HA 0;
- II. to dismiss the counterclaim for revocation in all other respects;
- III. that the costs of the proceedings be borne by the counter-claimants in the nullity proceedings.

14 By a document dated 8 July 2026, the claimant stated that that, in the counterclaim for nullity proceedings, it was withdrawing auxiliary claim 2 as set out in Annex WKS HA 0 and now intended to make the original auxiliary claims 3 to 6 into auxiliary claims 2 to 5, whereby the feature ‘an index enabling the locating of specific byte ranges within the media file’ is to be deleted from the claim formulations in accordance with the new auxiliary claims 2 to 5. These “new auxiliary claims 1–5” were filed by the Claimant as Annex WKS HA 3.

15 Similarly, in a document dated 8 July 2026, the Claimant stated that, in the infringement proceedings, it would assert as its new main claim that patent claim 1, as limited in accordance with auxiliary claim 5 (new) as set out in Annex WKS HA 3, had been infringed; in the alternative – in that order – auxiliary claims 4, 3, 2, 1 as set out in Annex WKS HA 3, and finally the patent claim in the granted version.

16 In a document dated 16 July 2026, the defendants objected to the admission of the new or amended applications.

- 17 At the oral hearing, the claimant stated that it was withdrawing the amended applications in the infringement proceedings, as set out in its documents of 8 July 2026.

POINTS AT ISSUE BETWEEN THE PARTIES

Claimant

- 18 The claimant considers the patent at issue to be valid and regards it as having been infringed.

Interpretation

- 19 In the claimant's view, the asserted claim 1 of the patent at issue relates to the client-controlled progressive playback of media sequences. The claim thus presupposes a medium characterised by its chronological order, such as a film or a video, for which the 'Trickplay' functions described in the patent are specific. The content of the media sequence must already have been created at the time of its playback and must have a certain duration and playback speed. This follows from the wording of the claim, its structure and the description of the patent at issue.
- 20 According to the claimant, the playback of the media sequence is client-controlled because the client uses the index to determine for itself the byte ranges within the media file required for playback, and in particular independently executes a user's Trickplay instructions. The server merely has to make the requested byte ranges available for download. Accordingly, the index must be available to the client before playback of the media sequence begins.
- 21 It is not necessary for a request queue to line up byte range requests that have already been generated. It follows from the wording of the claims and the patent description that it is sufficient for the data structures placed in the request queue merely to identify the relevant byte range. This can be achieved by simply specifying the relevant byte range. The queue is considered to be technically and functionally implemented if the order of the requests is defined – which can be achieved, and typically is achieved, by means of a list – and the requests are processed in accordance with this list or order.
- 22 The function of the mask is to display parts of the media file that have been downloaded. Accordingly, all implementations capable of performing this function are covered by the patent claim. These include not only bitmaps, but also directories, tables and other types of overview-style data structures. However, it is not necessary for the mask to be capable of displaying not only byte ranges but also parts of byte ranges that have been downloaded. This is already apparent from the example of implementation, in which a bitmap is used as a mask and each bit represents a byte range. Apart from that, each byte range is itself part of a larger

byte range and, in turn, comprises several small byte ranges. Byte ranges can therefore be subdivided as desired. How this is done is left to the discretion and expertise of the person skilled in the art. The same applies to the question of the means by which the byte ranges are determined using the mask. In particular, the mask need not determine byte ranges by using byte ranges. Instead, time ranges could also be used. In principle, the mask must also reproduce the downloaded byte ranges in full; this does not preclude the possibility that, due to the multi-step process from the reception of the byte range to its reproduction, individual byte ranges may not yet have been captured by the mask, even though the client's receiving unit has already received them.

Validity of the Patent

- 23 The claimant considers the patent at issue to be valid. The subject-matter of patent claim 1 is not based on an impermissible extension. The request queue constitutes the general management structure for byte-range requests, whilst the mask check determines which parts of the identified byte ranges are actually placed in the queue. The claim reflects this download mechanism disclosed in the patent application.
- 24 Furthermore, the technical teaching of the patent at issue is also patentable.
- 25 In the Claimant's view, the protected technical teaching is novel in comparison with the technical article 'Interactive Browsing of 3D Environment over the Internet' (D 10) by Zhang and Li. The prior art does not relate to a generic method in the sense of the progressive playback of a media sequence, but is limited to the calculation and display of a single still image on the basis of image fragments stored remotely on a server. Data transmission is not governed by a predetermined chronological sequence, but rather by a position and a viewing direction within a space that is interactively reconstructed rather than played back. The fact that images are captured using a camera pan is irrelevant. The image data on the server is no longer stored in any chronological order. A distinction must be made between the capture, compression and storage of the data and the playback. Such a reproduction within the meaning of the patent at issue is not disclosed in the prior art. The image data has neither a starting point from which reproduction could begin nor a predetermined subsequent view. Byte ranges for reproduction from the (non-existent) starting point are therefore not determined or requested. According to the teaching of the patent at issue, the start of playback means that playback is then continued. However, this is not the case in the prior art. Without further user input, only a single image is calculated and displayed. In this respect, there is also no buffering of the byte ranges until the start of playback. Instead, all received bytes are displayed immediately, even if the image cannot be displayed in full. Finally, there is also no disclosure of an index in accordance with the invention, because the index in the

prior art does not specify byte ranges for playback, but only the A- and P-frames on the basis of which the respective frame is rendered.

- 26 According to the Claimant, the teaching of the patent at issue is also not suggested by the technical article by Zhang and Li in combination with common technical knowledge. The prior art does not relate to video streaming, but to the calculation of new views on the basis of photographs stored on a server. The disclosed technology is unusable for video streaming. Nor does common technical knowledge remedy this.
- 27 The claimant is of the view that, with claim 1, the patent at issue claims a client- or player-based streaming method which offers various advantages over a server-controlled method. Against this background, a combination of prior art documents such as US 2004/0034870 A1 (D 1), which discloses a server-based playback method, with other server-based or even non-related prior art, such as the technical article by Zhang and Li (D 10), WO 2006/130964 A1 (D 11) or WO 94/24625 (D 9), would not suggest the teaching of the patent at issue. In particular, US 2004/0034870 does not disclose the requirement to identify byte ranges on the basis of an index and to request them from a remote server. It is also undisputed that no queue is disclosed. Even if it is conceded that queues form part of the current state of the art in communications technology, it is not apparent how US 2004/0034870 A1 could achieve improved video streaming by means of queues.
- 28 For these reasons, in the Claimant's view, the protected invention is also not suggested by WO 03/046750 A1 (D 2) in combination with the prior art, or by US 2005/0102371 A1 (D 3) in combination with the prior art or the technical article by Zhang and Li. The disclosure of WO 03/046750 A1 is limited to the use of the 'Hypertext Transfer Protocol' (hereinafter: HTTP protocol) for streaming. However, this does not mean that all conceivable functions of the HTTP protocol are disclosed and applicable to the streaming method. In particular, in response to a single request, the server continuously transmits further byte ranges unless the user issues a different instruction. This is a server-controlled process. Consequently, there is no division of the media sequence into multiple byte ranges requested by the client, and consequently no request queue or emptying of that queue. Notwithstanding this, there is also no index or mask as defined by the patent, and consequently no disclosure of the claim features, the subject-matter of which in each case presupposes an index or a mask. Nor can all of these be combined by means of the source code of the Mozilla Firefox 2.0.0.1 browser (D 12) or the ISO/IEC 14496-12 standard (MPEG-4 Part 12 (2005)). US 2005/0102371 A1 (D 3) actually leads away from the protected invention, as it teaches not to use a mask. Similarly, there is no disclosure of a request queue. A person skilled in the art would not refer to the technical article by Zhang and Li in order to arrive at the solution according to the invention.

- 29 In any event, on the basis of the auxiliary claims, the patent at issue will be found to be valid.

Infringement

- 30 The claimant takes the view that the defendants offer and supply the contested embodiment and thereby constitute an indirect infringement of the patent at issue.
- 31 It is the contested Netflix software that enables the customer's computer or mobile device to carry out the patented method in the first place. The Claimant has verified the suitability of the software for implementing the patented method in the context of the browser application for computers. For other end devices such as streaming players, games consoles, set-top boxes, Blu-ray players, smartphones and tablets, as well as computers and laptops, the technical situation is no different. Even if there are differences in the technical implementation, the respective client application must be identical to the browser variant examined in all its functionalities relevant to the patent infringement.
- 32 In the Claimant's view, the suitability of the contested embodiment for implementing the patent-protected method is evident from the investigations it has carried out. In particular, the contested embodiment uses a request queue: The client calculates the byte sizes of the video segments to be retrieved on the basis of the information in the downloaded 'sidx' box, which corresponds to the index described in the patent, and translates these video segment sizes into the corresponding byte ranges using the starting byte of the first segment. The determined byte ranges are placed in a list, where requests for the corresponding byte ranges are then generated. The Cadmium web player keeps track of which byte ranges are to be requested from the remote server, which have been requested, and which have been downloaded following a request. Sub-list 1 contains the byte range requests already sent by the client to the server and to which the server has responded; sub-list 2 contains the byte range requests sent by the client to the server but not yet (fully) answered; and sub-list 3 contains the prepared byte range requests that have not yet been sent to the server. Sub-list 3 constitutes a request queue within the meaning of the patent at issue. This list is also 'flushed' when the playback position jumps beyond the time range available in the cache and buffer as a result of a user instruction.
- 33 The claimant is of the view that, following a user instruction, the client also determines which byte ranges are required for playback in accordance with the user instruction. Following a jump to a new playback time within the cache, those video segments are retained in the cache whose time range includes the new playback time or whose time range lies after the new playback time. Newly requested byte ranges would seamlessly follow on from the video segment last fed into the buffer

. After a jump to a new playback time outside the buffer and temporary storage, however, all video segments in the buffer and temporary storage would be discarded. The first newly requested video segment would be the one within whose time range the new playback time falls. The subsequent video segments would follow on seamlessly from this one. Cadmium would therefore use the downloaded 'sidx' box (index) to determine those byte ranges of the media file that correspond to the video segments required to play the video track from the new playback time (in accordance with the 'Trick play' user instructions). These byte ranges would be placed in sub-list 3, which is to be re-established after the request queue has been 'flushed'.

- 34 Furthermore, according to the Claimant, the Cadmium player also maintains a mask within the meaning of the patent at issue. These are the data structures GA and Qn, which reflect the contents of the buffer memory (GA) and the temporary storage (Qn). Together, they form the mask. The data structures refer to the storage locations of the individual video segments (byte ranges) present in the buffer memory and the temporary storage, which are recorded in the data structures, amongst other things, by their first and last bytes as well as by their start and end times within the playback duration. Insofar as, from a data-processing perspective, there is a certain time lag between the receipt of the downloaded byte range at the client and the subsequent updating of the mask, this is immaterial.
- 35 The claimant further submits that the contested embodiment, using this mask – the data structures GA and Qn – determines whether at least part of a byte range required for playback from the new playback position has already been downloaded. In this respect, when a user inputs a command to jump from the current playback position to a new playback position, the Cadmium Player distinguishes between at least two cases: either the new playback position lies within the total downloaded range, comprising the buffer and cache, or it does not. If the new playback position lies outside the downloaded section, the byte ranges in the buffer and cache are discarded. All byte ranges from the new playback position onwards would be required. If the new playback position lies within the cache (and therefore also within the downloaded range), the byte ranges in the buffer would be discarded in full, whilst those in the cache would be discarded only partially. The video segments corresponding to the byte ranges that remain in the cache – and which have already been downloaded – would be required to play the media in accordance with the 'Trick play' user instructions.
- 36 The two data structures GA and Qn would be used to make these distinctions (new playback position within or outside the downloaded region): To determine the duration of the downloaded range formed from the buffer and the cache, the Cadmium player uses the two data structures to calculate the start time of the first segment and the end time of the last segment in the buffer as well as in the

cache. The values determined would be combined to form the start and end times of the downloaded section, and a check would then be carried out to see whether the new playback position falls within the downloaded section.

- 37 If the new playback time falls within the downloaded section, the defendants argue that the retained video segments in the cache are available for playback; in other words, these video segments have already been downloaded from the remote server and therefore do not need to be downloaded again. The newly requested video segments would follow on seamlessly from the existing video segments. If, on the other hand, the new playback time falls outside the downloaded range, the video segments from the new playback time onwards would have to be requested from the remote server and downloaded, as these video segments are not already available.

Legal consequences and ancillary rulings

- 38 The claimant is of the view that the order for an injunction is proportionate. A claim for damages should be established with effect from the date of grant of the patent at issue. According to the Claimant, the information sought in claim I. 2. is intended to enable it to ascertain the extent of the infringing acts and to obtain information about any other third parties acting in collusion with the defendants. The purpose is to be able to effectively remedy the consequences of the infringement. By contrast, claim I.3. serves to quantify the claim for damages. Since the information is necessary for the claimant for the purposes of remedying the consequences of the infringement and calculating damages, and since there are no compelling confidentiality interests on the part of the defendants that would preclude the disclosure of information to the extent requested, there are also no concerns regarding the proportionality of the claim for information. In any event, this requirement is satisfied by a reservation regarding the involvement of an auditor. The claimant considers the proposed threats of a daily penalty payment to be proportionate. In particular, there are approximately 30 million Netflix subscribers in Germany and France alone, meaning that on every day on which the contested embodiment is operated, a significant number of patent infringements occur, and a penalty payment of EUR 100,000.00 per day is appropriate for the enforcement of the injunction.
- 39 The claimant does not consider it necessary to provide security for enforcement in favour of the defendants. Its financial position gives no cause for genuine concern that a potential claim for damages against it could not be enforced, or could only be enforced at disproportionate expense, should the first-instance decision be set aside or amended. The annual report of the predecessor company submitted by the defendants (Exhibit QE 5) is irrelevant in this respect. The reference to third-party websites does not lead to a different assessment, as the defendants conflate financial indicators and thus arrive at incorrect conclusions. The turnover figures cited by the defendants say nothing about the Claimant's financial position. The claimant disputes the defendants' arguments in this regard.

defendant

Interpretation

- 40 The defendants are of the view that the technical teaching of the patent at issue is not limited to the progressive playback of video files. It cannot be restricted, by the terms 'progressive playback' and 'media sequence' to the playback of 'time-based media content'. There is no basis in the claim for a distinction between playback that is allegedly within the scope of the claim and the mere 'reconstruction' of a new view.
- 41 The defendants take the view that the request queue must be a queue of requests, not merely a list of requests that have not yet been sent. The purpose of the request queue is to hold requests that have already been generated in a specific order, ready to be sent directly to the server from the queue. There is a technical connection between the features of the claim – placing byte ranges into a request queue and retrieving the byte ranges from the queue – which precludes a mere list. There is only one queue into which requests are to be placed and from which they are to be sent. This does not involve the conversion of byte ranges into byte range requests.
- 42 In the defendant's view, a mask within the meaning of the patent claim is not a table of contents of any kind, but is clearly defined by the patent at issue. Accordingly, a mask merely displays the downloaded parts of the media file – that is to say, the parts of a byte range – and contains no further information such as time ranges or the byte ranges themselves. The wording is unambiguous in this respect: in the method according to the patent, no check is carried out as to whether the required byte ranges have already been downloaded. Rather, the mask is used to determine whether at least a part of a required byte range has already been downloaded. Only these parts of byte ranges are then placed in the queue. In this respect, the wording clearly distinguishes between 'byte ranges' and their 'parts'. The entries in the mask then represent the parts of the downloaded byte ranges – referred to as 'blocks' in the patent's wording – and not the entire byte range. Nor is it sufficient for the mask merely to specify time ranges which are later to be converted into byte ranges. Ultimately, the mask must display all downloaded parts of byte ranges in full. This follows from its technical function of avoiding repeated downloads.

Validity

- 43 The defendants consider the patent at issue to be invalid.

- 44 They take the view that the technical teaching of patent claim 1 has been inadmissibly extended in relation to the parent application and the divisional application, because, according to this claim, byte ranges are placed in the queue without first checking whether parts of the byte ranges have already been downloaded. This is not disclosed in the patent application in this form.
- 45 The defendants further take the view that the technical teaching of claim 1 of the patent at issue is prejudicially anticipated by the technical article 'Interactive Browsing of 3D Environment over the Internet' (D 10) by Zhang and Li. The prior art discloses the storage of a concentric mosaic on a server and the streaming of sections thereof to a client. This corresponds to the progressive playback, as claimed, of a media sequence stored as a file on a server by a client. Furthermore, the prior art, with its index, request queue (containing only those parts of byte ranges that have not yet been downloaded), mask and user instructions, discloses the key features of the teaching claimed. Consequently, the teaching of the patent at issue is suggested, at least on the basis of this prior art in combination with general technical knowledge. Implementation details specified in claim 1 of the patent at issue cannot, from the outset, establish sufficient inventive step.
- 46 The defendants are of the view that the teaching of the patent at issue was, in any event, suggested by the prior art. US 2004/0034870 A1 (D 1) constitutes the closest prior art, relating to a streaming method in which the media content is played back whilst it is still being downloaded. The client also sends byte-range requests to the server. Only the queue-related features are not disclosed. However, queues form part of general technical knowledge within the prior art. Given the technical problem of providing a streaming method that relieves the strain on the limited communication resources with the server whilst simultaneously reducing delays caused by creating new byte-range requests and waiting for those that are no longer required, a person skilled in the art would have implemented a queue for server requests. In any event, they would have come across the technical article by Zhang and Li (D 10), WO 2006/130964 A1 (D 11) or WO 94/24625 (D 9), which would have led the person skilled in the art, in an obvious manner, to the teaching of the invention.
- 47 The defendants further take the view that claim 1 of the patent at issue also fails to meet the required level of inventive step in relation to WO 03/046750 A1 (D 2) in combination with general technical knowledge. The cited document deals with playback manipulation when streaming media content using the HTTP protocol. It discloses all the features of the invention as claimed, with the exception of the request queue. Content objects are stored as files on the remote origin server and contain a 'file header', which qualifies as an index. On the basis of this, the client determines a starting point and the byte ranges necessary to play the media from that point. These are downloaded, buffered and played back. User instructions are implemented on the basis of the 'file header'

and the required byte ranges are requested. The mask corresponds to the cache provided for by the HTTP protocol, a download cache. This is disclosed in the HTTP 1.1 specification (D 8), which the person skilled in the art is familiar with. The 'entity tag' in the header of every response message stored in the cache constitutes the entries in the template. Only byte ranges that are not already present in the cache are downloaded. If, on this basis, a streaming method were to be provided that relieves the strain on the limited communication resources with the server whilst simultaneously reducing delays caused by creating new byte range requests and waiting for those that are no longer required, the implementation of a request queue would have been an obvious solution – as in US 2004/0034870 A1. It was part of the general technical knowledge of a person skilled in the art that browsers provided queues for the transmission of HTTP requests in order to take account of the fact that many web servers only permitted a certain number of active connections. This is evident, for example, from the source code of version 2.0.0.1 of the Mozilla Firefox browser (D 12).

48 Finally, according to the defendants, claim 1 of the patent at issue is not inventive even when considered in the light of US 2005/0102371 A1 (D 3) in combination with the prior art or the technical article by Zhang and Li (D 10). The prior art relates to the streaming of a file stored on a server to a terminal device, that is to say, to the playback of a media file whilst it is still being transferred from the server to the client. It discloses all the features of the contested patent claim with the exception of those relating to the request queue as defined in the claim. In particular, a mask is also disclosed. The prior art expressly assumes that HTTP is used for data transmission. Against this background, the person skilled in the art would also take into account the information provided in the HTTP 1.1 specification (D 8) regarding the use of a cache. The request queue, in turn, is suggested by the combination with the prior art or the technical article by Zhang and Li (D 10).

49 According to the defendants, the patent at issue cannot be upheld on the basis of the auxiliary claims either.

Infringement

- 50 The defendants are of the view that, in so far as the claimant challenges the defendants' services other than the web browser-based service, it has not put forward any substantial arguments in this regard. As the claimant concedes, there are technical differences between all the applications mentioned. Therefore, in so far as the claimant asserts that the actual streaming concept is independent of the end device and that, consequently, the client application is identical in all its functionalities for the purposes of patent infringement, this argument is misguided. In the absence of a streaming concept, the functionalities need not be identical.
- 51 The defendants consider that the claimant has not conclusively demonstrated that the contested embodiment uses a request queue as defined in the claims. It refers solely to 'lists for managing byte-range requests', in particular to

sub-list 3, which represents a directory of internal byte range requests not yet sent to the server. This is insufficient, they argue, because it has not been demonstrated that the range requests themselves are queued.

- 52 Indeed, this is not the case. The video content hosted by the defendants is encoded at various bitrates and stored in corresponding container files on different servers. The playback software is able to switch between the container files. Consequently, the streams within the files are divided into smaller units, known as ‘movie fragments’, and – due to bitrate-adaptive streaming – these are organised into time intervals rather than byte ranges: the number of bytes in each fragment varies depending on the bitrate. These fragments can be requested and downloaded by the Netflix software via a ‘MediaRequest’. In doing so, the Netflix software does not communicate directly with the server, but via the browser. Once a ‘MediaRequest’ is created, it is sent to the browser via an interface (‘API’). Whether and when the browser sends the ‘MediaRequest’ to the server is under the browser’s control. The Cadmium web player in the contested embodiment maintains a status list for this purpose, containing the created ‘MediaRequests’ (“Sub-list 3”), the “MediaRequests” sent by the browser to the server (“Sub-list 2”) and those “MediaRequests” for which the requested fragment has been received from the server via the browser (“Sub-list 1”) are recorded. The feature of a request queue is not realised because, in the Cadmium software, ‘MediaRequests’ are not placed in a request queue before being sent to the server, but are sent directly to the browser API. ‘Sub-list 3’ merely records the ‘MediaRequests’ that have been created.
- 53 The defendants further maintain that the claimant has not conclusively demonstrated that the contested embodiment comprises a mask. It does not follow from the claimant’s submissions that the alleged mask of the contested embodiment displays all downloaded byte ranges. According to the claimant, the two buffer and cache masks maintained by the Cadmium code are intended to form a mask in accordance with the invention. However, this contradicts the assertion that ‘Sub-list 1’ displays byte-range requests for downloaded bytes that have not yet entered the cache and are therefore not displayed in the mask either. The mask does not fully reflect the downloaded byte ranges.
- 54 In fact, the contested embodiment does not use a mask in accordance with the invention. The data structures ‘GA’ and ‘Qn’ identified by the Claimant do not – even when taken together – fulfil the requirements set out in the claims for a mask, according to which each bit corresponds to a block of a specific length to be downloaded.
- 55 Furthermore, the contested embodiment does not determine which byte ranges have already been downloaded. These play no role in determining whether the required parts of the media file have already been downloaded. This is already demonstrated by the Claimant’s calculations, which are based solely on time intervals within the file. In fact,

time is also the sole relevant criterion for checking which parts of the file have already been downloaded. This follows from bitrate-adaptive streaming. The client relies exclusively on the time range covered by the respective segment. It does not determine whether at least part of a byte range has been downloaded.

- 56 In the contested implementation, byte ranges that have been requested once are not divided into parts of byte ranges either. Only complete 'MediaRequests' can be requested from the server, and the bytes contained therein can be downloaded in their entirety. It is not possible to request or download only a part of the byte range covered by a 'MediaRequest' from the server. Accordingly, there are also no parts of byte ranges that are identified using a mask, placed in a queue and downloaded. The data structures GA and Qn, identified by the Claimant as a mask, always refer only to the entire 'MediaRequest'. Whilst this may request several fragments – 'movie fragments' as parts of the media file – . Within the data structures GA and Qn, the 'MediaRequests' form a fixed unit that cannot be further broken down into individual fragments. Accordingly, no individual fragments are displayed in GA and Qn. The contested embodiment allows only for checking whether a 'MediaRequest' has been downloaded in its entirety. Unlike the patent at issue, the contested embodiment does not provide for a further level of granularity.
- 57 Furthermore, the contested embodiment sometimes requests byte ranges that have already been downloaded: if the video and audio tracks do not cover the same time range, then, according to the Claimant's submission, only those byte ranges lying within the overlapping time range would not be downloaded. Byte ranges that exist for only one track would be downloaded again. Even if the user jumps back to a section outside the buffer and cache, all fragments stored in the buffer and cache would be discarded, meaning that the MediaRequests would also have to request previously downloaded fragments again. In any case, as playback progresses, older downloaded fragments would be discarded, which might subsequently need to be reloaded.
- 58 Finally, in the defendant's view, the teaching of the patent at issue is not realised because the contested embodiment relies on time intervals to determine at least part of a byte range required for playback in accordance with the user's instruction. The contested embodiment does not determine whether a (part of a) byte range has been downloaded. Rather, it determines whether a time range has been downloaded. This is not a matter of interpretation as to which means the mask uses to determine the parts of byte ranges; rather, the point is that the contested embodiment simply does not determine (parts of) byte ranges that have already been downloaded.

Legal consequences and ancillary decisions

- 59 The information sought in applications I. 2. and 3. relates to highly sensitive commercial data constituting trade secrets; consequently, in accordance with Rules 191 and 190.1, sentence 2 of the RoP, it must be ordered that such information be made available only to specific persons to be named by the Claimant and that it be subject to an appropriate duty of confidentiality. Furthermore, there is no legal basis for the information requested in the application under I. 2. a) i) and ii). In any event, in the case of an indirect infringement, the obligation to provide information on manufacturers (or developers, as requested by the Claimant), suppliers and other previous owners of the product must be limited to cases where the provision for the patent-infringing use of the supplied product already existed in relation to them. The application under I. 2. b) cannot succeed either, as it is not sufficiently specific and the contested embodiment does not constitute a product within the meaning of Article 67(1)(b) of the UPC Agreement. The application under I. 2. c) is too broad, as it is limited neither to third parties nor to persons acting in a commercial capacity. The application under I. 3. is insufficiently specific and disproportionate. The applications for periodic penalty payments relating to the injunction and the obligations to provide information and account are also vague and, in any event, excessive. A threat of periodic penalty payments with no upper limit lacks the specificity required under the rule of law for a threat of a penalty. Furthermore, the order for a penalty payment must be proportionate to the order to be enforced and requires a case-by-case assessment. However, setting a lower limit unduly restricts the court in this assessment.
- 60 The defendants are of the view that, in the event of a conviction, enforcement of the decision must in any event be made conditional upon the Claimant providing security. This is because the Claimant's financial situation gives rise to concerns that, should the first-instance decision be set aside or amended, any potential claim for damages could not be enforced and/or executed, or could only be done so at disproportionate expense. The claimant itself does not publish any current financial results; however, its legal predecessor, DivX, Inc., last published an annual report in 2010, according to which it had generated turnover of USD 64,922,000.00 in 2009, whilst achieving a net profit for the year of only USD 131,000.00 (Exhibit QE 5). Third-party websites suggest that the Claimant's financial position has deteriorated since then and that it is now generating revenue of only USD 24,000,000.00 or even USD 13,300,000.00 (collection of exhibits QE 6). Against this background, it is doubtful whether the Claimant could cover the costs of the legal proceedings amounting to EUR 871,000.00 (for both instances), let alone compensate for any further loss, which would in any event amount to the value in dispute of EUR 2.5 million – that being the Claimant's economic interest.

Further submissions

- 61 Following the expiry of the deadlines for the submission of documents in the written procedure, the parties have on several occasions applied either for the opposing party's submissions to be disregarded or for further submissions to be permitted.

Reply to the statement of defence

- 62 For the first time, in the reply to the statement of infringement dated 9 February 2026 (pages 9 to 15 thereof), the defendants argued that the teaching of the patent at issue was also not realised because, in the event of a 'jump' within the downloaded range, the alleged 'request queue' was not cleared and, consequently, a new 'request queue' was not established. In this respect, the Claimant's allegation of infringement is already deficient, as it relates solely to a

'jump' outside the downloaded range. The 'flushing' of the 'request queue' – that is, the deletion of sub-list 3, which is intended to identify the byte ranges already downloaded on the basis of the mask and to establish a new queue – occurs in the contested embodiment exclusively when the jump lies outside the buffered and cached, i.e. the downloaded, range. However, the teaching of the patent at issue is to be understood as meaning that, once the parts of the byte ranges that have not yet been downloaded have been determined on the basis of the mask, requests may only be placed in the new 'request queue' and retrieved from there in relation to those parts. If parts not yet downloaded were placed in an original queue that had not been emptied, rather than in a new queue created after emptying, and were requested from there, this would not be in accordance with the claims. In other words: irrespective of whether parts of the required byte ranges have already been downloaded and are therefore available, the request queue must be emptied and rebuilt with the required but not yet available parts of the byte ranges.

- 63 In its document of 26 June 2026, the claimant requested that this submission be disregarded, as it relates exclusively to the statement of claim and therefore does not constitute a response to the reply to the infringement claim. In the alternative, it requests that, should the defendants' submission be taken into account, its response to that submission, set out in the same document of 26 June 2026, also be taken into account.

- 64 The defendants objected to this in a document dated 16 July 2026.

Duplicate in response to the application to amend the patent

- 65 In their rejoinder to the application for amendment of the patent dated 9 April 2026 (pages 6 to 27 thereof), the defendants, in addition to their objection of lack of novelty in relation to the technical article 'Interactive Browsing of 3D Environment over the Internet' (D 10) by Zhang and Li and to the objection of lack of inventive step – in one instance based on D 10 and in the other on US 2004/0034870 A1 (D 1).

66 In a document dated 26 June 2026, the claimant requested that this pleading also be disregarded, on the grounds that it actually related to the claimant's rejoinder to the counterclaim for nullity, and not to the Reply to the application for amendment of the patent. In that part of their document, the defendants did not address the specifics of the first alternative claim, but rather other features. In the alternative, the Claimant requests that, should the defendants' submission be taken into account, her – the Claimant's – defence in the document of 26 June 2026 also be taken into account.

67 The defendants objected to this in their document of 16 July 2026.

Submissions regarding the EPO's qualified notice

68 On 3 July 2026, the Opposition Division at the European Patent Office (EPO) issued a qualified notice in the opposition proceedings concerning the patent at issue.

69 In a document dated 8 July 2026, the claimant responded to this notice. It agrees in part with the Opposition Division's preliminary view, but takes the view that the EPO is mistaken in assuming that the patent at issue lacks an inventive step on the basis of US 2004/0034870 A1 (D 1). However, D 1 does not, in any event, disclose the retrieval of an index which maps the media structure and enables the assignment of arbitrary playback positions to the byte ranges required for this, as required by the patent at issue. The Claimant requests that its submissions regarding the European Patent Office's qualified notice be admitted.

70 The defendants have commented on this in their document of 16 July 2026. They see no grounds for admitting the submission. The EPO's observation does not point to a clear path to patentability. Rather, it demonstrates non-infringement and a lack of legal validity. Furthermore, the submission regarding the lack of disclosure of a claim-compliant index in D 1 is not to be taken into account according to the Claimant's own standards, as it constitutes an entirely 'new argument'.

REASONS FOR THE DECISION

71 The admissible counterclaim is unfounded, whereas the admissible infringement claim is well-founded.

A Content of the file admissible for consideration

72 In view of the parties' applications based on Rules 9.2 and 36 of the RoP, it must first be clarified which applications the court may take into account in reaching its decision.

I. Legal principles

- 73 Pursuant to Rule 9.2 of the RoP, the Court may disregard procedural steps, facts, evidence or arguments which were not taken or submitted by a party within the time limit set by the Court or provided for in these Rules of Procedure. The court enjoys broad discretion in this regard. On the one hand, account must be taken of the 'front-loaded' system established by the Rules of Procedure, which is intended to protect the opposing party and the court from being 'ambushed' by new submissions outside the time limits for filing pleadings, particularly shortly before the hearing date. On the other hand, this principle does not require the claimant to anticipate every possible line of defence and to put forward all relevant arguments, facts and evidence from the outset, without being permitted to add anything subsequently. The same applies to the defendant's defence submissions (Court of Appeal, Order of 18 September 2024, UPC_CoA_264/2024 – NST v Audi). In particular, despite the reference to arguments in Rule 9.2 of the RoP, neither must the legal reasoning provided by a party be exhaustive, nor is the Court limited to it (Munich local division, Order of 20 June 2025, UPC_CFI_149/2024 – Headwater v Motorola). Likewise, the parties must be able to respond to subsequent factual developments. In this respect, it must be assessed, in accordance with the principles of fairness, justice and efficiency as well as the right to be heard, whether the respective submission is to be taken into account.
- 74 The same principles apply to the application of Rule 36 of the RoP (see Court of Appeal, Order of 24 June 2025, UPC_CoA_579/2025 – Otec v Steros).

II. Application in the present case

- 75 The Court exercises its discretion under Rules 9.2 and 36 of the RoP to take into account the following submissions by the parties, including the accompanying annexes, in the proceedings:
- a) Submissions on pages 9 to 15 of the defendant's reply to the infringement claim dated 9 February 2026 (Section II.1 and the introductory section under II.);
 - b) The claimant's defence to the submissions under (a) in the document of 26 June 2026;
 - c) Submissions on pages 6 to 9 and 17 to 19 concerning feature a and time-criticality in the defendant's quadruple reply of 9 April 2026 (section A. III. 1. a) with the introductory section under A. III. 1. and section A. III. 2.);
 - d) The claimant's defence to the arguments under (c) in the document of 26 June 2026;
 - e) The claimant's submissions in the document of 8 July 2026;
 - f) The defendant's defence to the arguments set out under (e) in the document of 16 July 2026.
- By contrast, the remaining submissions on pages 9 to 17 and 19 to 27 of the defendant's quadruple reply of 9 April 2026 are not to be taken into account.

1.

76 The defendant's submissions under (a) are not to be disregarded pursuant to Rule 9.2 of the RoP. These submissions largely concern legal arguments regarding the interpretation of the patent at issue and the (alleged) lack of coherence in the claimant's submissions. Even though this submission essentially relates to the statement of claim and not to the Reply to the Defence, such supplementary legal arguments are not automatically inadmissible under the above principles and are, within the limits set out here, to be admitted on an exceptional basis. In so far as the defendant's submission contains further factual arguments (flushing the request queue only when jumping outside the downloaded range), this remains within narrow limits and clarifies the necessary findings regarding the functioning of the contested embodiment. As the claimant's defence to this submission has shown, the defendant's submission did not lead to any procedural delays, but at most raised specific questions regarding the interpretation of the patent at issue. Since the claimant had sufficient opportunity to respond comprehensively to this submission by the defendant, there are no compelling reasons, even from the perspective of fairness and the right to be heard, not to take this submission into account. Conversely, the Claimant's defence under (b) must likewise be admitted in accordance with Rule 36 of the RoP.

2.

77 As regards the defendant's quadruple reply of 9 April 2026, only the arguments set out under (c) in accordance with Rule 9.2 of the RoP and the Claimant's defence thereto under (d) are to be taken into account; the remaining arguments on pages 9 to 17 and 19 to 27 of the defendant's quadruple reply of 9 April 2026 are not to be considered. The defendant's quadruple reply constitutes the duplicate reply to the application for amendment of the patent, which, pursuant to Rules 55 and 32.3 of the RoP, must be limited to the arguments set out in the Reply to the defence against the application for amendment of the patent. It is true that, in the relevant sections, the quadruple reply refers to auxiliary claim 1 and, in part, also to other auxiliary claims. However, the part of the defendant's submissions in the quadruple reply that is not to be taken into account does not relate to the features that are the subject of these auxiliary claims, in particular not to the feature of the 'movie file', which is the subject of auxiliary claim 1, but to other features and thus, in fact, to the claimant's submissions in the duplique to the Reply to the defence to the counterclaim for nullity. However, it is neither apparent nor has it been argued that these further submissions could not already have been raised by the defendants in their reply to the defence to the counterclaim. Nor is it apparent that these arguments are relevant to the decision; consequently, it is not only justified but, in view of the specific circumstances of the case and the interests to be taken into account, necessary to disregard them. The situation is different only in respect of the admissible submission under (c), which concerns the feature 'movie file' and, in that respect, relates to the Claimant's arguments set out in the Reply to the application for amendment of the patent. The Claimant's defence to this is admissible under (d) in accordance with Rule 36 of the RoP.

3.

- 78 The Claimant's document of 8 July 2026 concerns the qualified observation issued by the Opposition Division at the EPO in the proceedings relating to the patent at issue, as well as the Claimant's arguments regarding that observation. This observation further structured the subject-matter of the proceedings, and the Claimant was right to base the defence of its claimed patent on this observation. This is based on the correct understanding that conflicting decisions by the UPC and the EPO should be avoided. Although there are no conflicting decisions in the strict sense, as both panels rule successively on the same intellectual property right, the Court considers it appropriate in this case to admit the EPO's qualified notice and the Claimant's submissions thereon into the proceedings pursuant to Rule 36 of the RoP, in order to ensure that the Office and the Court decide largely on the same basis. This consequently also entails admitting the Claimant's objection that US 2004/0034870 A1 (Annex D 1) does not disclose an index within the meaning of the patent at issue. This objection is not entirely new, as the Claimant has argued from the outset that D 1 does not disclose that the client determines byte ranges on the basis of an index. The principles of fairness and the right to be heard are likewise upheld, as the defendants had the opportunity, through their documents dated 16 July 2026, to respond comprehensively to this submission, and because D 1 was hearing and could be discussed in detail.

B The technical teaching of the patent at issue

I. State of the art, problem, solution

- 79 The invention according to the patent at issue relates generally to the playback of multimedia files over a network, in particular to the continuous playback of multimedia files whilst they are being downloaded over a network (para. [0001]; paragraph references without specific citation are those of the patent specification).
- 80 The patent specification explains, with regard to the technical background of the invention and the state of the art, that 'progressive playback' involves playing back content from a remote server whilst it is still being downloaded. With this function, a user can select a film on a remote server and start watching it before the film has been fully downloaded. Even with a fast internet connection, waiting for a film to download in full can take several minutes or even hours, depending on the size of the media file. With progressive playback, however, a user need only wait a few seconds before playback can begin (paragraph [0002]).
- 81 With regard to the state of the art, the patent specification criticises the fact that current implementations of receiver- or player-based progressive playback are suitable for short video clips, as is common in many applications, but are typically limited in scope and

flexibility of the progressive playback they provide. Players generally download files linearly from start to finish. Playback begins once the player has buffered enough data to ensure there is a reasonable likelihood that the media can be played without interruption. The required amount of buffered data could either be a fixed value, suitable for a large percentage of content, or a dynamic value, whereby the player determines how much data is required to play the entire content without a buffer underrun occurring. Although these methods are suitable for playing short video clips, they generally do not support random navigation, 'trickplay' functions or the playback of longer content stored externally, such as feature-length films. A relevant example is disclosed in US publication 2004/034870 (para. [0003]).

- 82 With regard to the implementation of systems using a server-based approach, the patent at issue cites, by way of example, the systems disclosed in US patent applications 11/323,044, 11/323,062, 11/322,543 and 11/322,604. In these systems, the server analyses the data file and determines which data is to be transmitted. Network efficiency and flexibility in playback can be achieved much more easily through such an approach. However, the patent at issue describes as a disadvantage the fact that standard HTTP web servers do not generally offer this functionality [referring to trick-play functions], and that bespoke web servers providing this functionality often scale poorly when required to deliver content simultaneously to a large number of players (para. [0004]).
- 83 With regard to browser-based players, the specification of the contested patent states that they often implement user-controlled playback by analysing the video file whilst it is being downloaded linearly. If a longer clip is started, it is not possible to jump to or fast-forward to a point in the file that has not yet been downloaded. The open-source software Samba grants any application access to a remote file as if it were a local file. It attempts to minimise access latency by pre-caching data from the current file position, which can be set arbitrarily. According to the patent specification, this may be insufficient when 'trick play' functions are to be executed (e.g. functions such as rewinding, fast-forwarding and jumping between scenes, which require non-sequential access to media content). The video frames to be transmitted to the player in these scenarios might be widely spaced or require a more complex sequence, which significantly reduces the usefulness of conventional pre-caching methods based on assumptions regarding the video frames to be displayed subsequently (para. [0005]).
- 84 The patent at issue does not itself formulate a task or problem. However, against the background of the prior art described and its disadvantages, the technical problem underlying the patent at issue can generally be formulated as follows: to

to improve the progressive playback of content located on remote servers, in particular to play back larger media files stably and flexibly without significant access delays, i.e. including the use of 'trick play' functions.

- 85 This is to be achieved by a method having the features of claim 1 of the patent at issue, which, as proposed by the parties, can be structured as follows:
- a A method for the progressive playback by a client of a media sequence stored as a media file on a remote server (12), wherein the media file contains an index,
 - b wherein the method comprises the following steps carried out by the client:
 - b1 obtaining (42) the index from the remote server;
 - b2 determining (44) a starting point within the media sequence;
 - b3 Determining (46), using the index, byte ranges of the media file corresponding to media required to play the media sequence from the start point;
 - b_new Placing the identified byte ranges into a request queue;
 - b4 Requesting (46) the byte ranges from the request queue that are required to play the media sequence from the starting point;
 - b5 buffering received bytes of information until playback begins; and
 - b6 playing back (48) the buffered bytes of information;
 - c wherein the method also comprises the following steps, performed by the client upon receipt (50) of a user instruction:
 - c1 determining (54), using the index, byte ranges of the media file corresponding to media required to play the media sequence in accordance with the user instruction;
 - c2 Clearing (110) the request queue;
 - c_new Setting up a request queue using the byte ranges identified in response to the user instruction; and
 - c3 Requesting (46) the byte ranges from the request queue that are required to play the media in accordance with the user's instruction;
 - d wherein the method further comprises the following steps performed by the client:

- d1 maintaining a mask indicating the parts of the media file that have been downloaded;
- d2 Determine, using the mask, whether at least part of a byte range required to play the media in accordance with the user's instructions has already been downloaded;
- d_new Place in the request queue only those parts of byte ranges that have not already been downloaded from the remote server in order to play the media in accordance with the user's instructions; and
- d3 Request (46) the byte ranges from the request queue.

II. Interpretation

- 86 In view of the dispute between the parties, the patent claim and certain terms used therein require interpretation.

1. Person skilled in the art

- 87 The interpretation must be carried out from the perspective of a hypothetical person skilled in the art, possessing the relevant technical knowledge and professional and technical experience in the technical field to which the technical teaching pertains (see CoA, Decision of 25 November 2025, CoA_464/2024 – Meril v Edwards; Decision of 25 November 2025, CoA_527/2024 – Amgen v Sanofi).

- 88 According to the defendant's submission, the relevant expert in this case is a systems engineer with a degree in media technology who has several years' professional experience in the field of media streaming technology. The claimant has not contested this.

2. Progressive playback

- 89 Claim 1 of the patent at issue relates to a method for the progressive playback of a media sequence, which is stored as a media file on a remote server, by a client (feature a).
- 90 The method thus serves to enable the continuous playback on a user device of a medium characterised by the duration of its perception, whilst the medium, stored as a file on a remote server, is still being downloaded. The media file is a self-contained set of bits and bytes which, in accordance with the further specifications of feature a, is stored on a remote server and may comprise a video and/or an audio recording. This follows from the wording of the patent claim, its intended purpose and the description of the patent at issue.

- 91 It is undisputed between the parties that 'progressive playback' involves playing back remotely stored media content whilst it is still being downloaded from its remote storage location to the user device. This definition of progressive playback is derived from the patent at issue itself (paragraph [0002]).
- 92 From the concept of a 'media sequence' and the fact that this media sequence is to be 'played back', it further follows that the protected technical teaching does not concern the static display of media content such as an image, but rather that the media content is characterised by the temporal sequence of its playback and its perception, and consequently the media file is characterised by the corresponding internal order of the bytes to be played back, as is the case, for example, with a video or an audio recording.
- 93 This can already be inferred from the term 'media sequence', which refers to the temporal order in the sense of a chronological sequence of its content and thus to a certain duration of the media sequence. The terms 'play' or 'playback' in the authoritative English version of the patent at issue also presuppose a chronological sequence and duration for the playback and perception of the media sequence. The German translation using 'Wiedergabe' is, in this respect, too general and fails to take into account an essential characteristic of the media sequence, which is better reflected in the term 'play'. The term 'starting location' ('Startposition') in feature b3 also indicates that, from a temporal perspective, the playback and perception of the media sequence have a beginning and an end.
- 94 This understanding corresponds to the description of the patent at issue, which repeatedly refers to 'longer content', films, video clips, video files and audio files as media sequences (see, for example, paragraphs [0002], [0003], [0005], [0013], [0052]). These are exclusively time-based media and content. Furthermore, the container formats for the relevant files mentioned in the patent at issue refer, without exception, to video and audio content (see paragraph [0033]).
- 95 The very purpose of the patent at issue is to enable . By 'Trickplay' functions, the patent at issue means, by way of example, rewinding, fast-forwarding, skipping or pausing (see paragraphs [0005] and [0032]), which are typical of user commands in the context of sequential playback of chronologically ordered media content. Precisely because these 'Trickplay' functions disrupt the sequential nature of the media (see paragraphs [0032]), a technical implementation is required that enables the user to utilise such functions, ideally without causing a significant delay to media playback (see paragraphs [0003] and [0005] regarding the disadvantages of the prior art). This is achieved by feature groups b, c and d (more on this in detail later).

- 96 Among other things, the buffering of the received bytes in accordance with feature b5 only makes sense in the context of the sequential playback of time-based media. This is because, according to the description of the patent at issue, the purpose of buffering is precisely to hold enough bytes to ensure uninterrupted playback of the media sequence over its entire duration, thereby preventing a 'buffer under-run' (paragraph [0003]).
- 97 The time-based nature of the playback and perception of the media sequence means that the media file must also be a self-contained set of bits and bytes, stored on a remote server and comprising a video and/or an audio recording or a comparable medium. The claim distinguishes between distinct subsets of bytes within the media file, including, in particular, the index and the media sequence. The latter comprises the actual media data (audio/video data), which must be decoded and displayed by the player, whilst the index is a separate part of the media file. Bytes of the media sequence are arranged in such a way that they must be decoded and played back in a fixed order in order to reproduce the media content correctly.

3. Byte ranges

- 98 The method for the progressive playback of a media sequence stored on a remote server is essentially characterised by the fact that the client retrieves from the server the byte ranges of the media file required for the playback of the media sequence (feature b4) and plays back the bytes one after the other (feature b5). The client obtains information on which and how many bytes are required for the playback of the media sequence and/or how these bytes are divided into ranges from an index (feature b3) contained within the media file (feature a) and made available to the client by the server (feature b1).
- 99 Since the media file consists of a set of bytes and the bytes of the media sequence are arranged in a fixed temporal relationship to one another, which must be decoded and played back in a specific chronological order, the byte range of a media file, within the meaning of the patent at issue, specifies a specific number of specific bytes of that file. This constitutes a defined section of the media file in the form of a specific number of bytes. The byte range may, for example, be specified by identifying the individual bytes – such as their number, where one exists – or by identifying the first and last bytes of the byte range, or by some other means of uniquely locating a specific section within the media file.
- 100 The retrieval and playback of individual byte ranges by the client allows the progressive playback of the media sequence to be controlled on the client side. It is the client that uses the index to determine the required byte ranges and requests them from the server, which merely has to send them to the client on demand. In particular, this enables client-controlled trick play functions to be implemented. In response to a corresponding user command to

to fast-forward or rewind the media sequence or to skip forwards or backwards within it ('trick play'), the client again uses the index to determine the byte ranges of the media file required to play back the media sequence in accordance with the user's instruction (feature c1), requests them from the server (feature c3) and plays them back. In order to minimise communication with the server (requests for byte ranges) and data traffic (transfer of the byte ranges), the client maintains a request queue for the required byte ranges and a mask for displaying the bytes that have already been downloaded. The details will be discussed later.

- 101 The key point is that the byte ranges serve as the basis for retrieving the media file from the server, its playback by the client, and also for the execution of trick-play functions. The entire media sequence to be played is stored on the server as a media file in the form of bytes. However, it is not made available to the client at the server's instigation; rather, the client independently determines, on the basis of the index, the byte ranges within the media file required for playback of the media sequence, retrieves these byte ranges from the server by means of corresponding requests, and plays them back. Furthermore, these byte ranges always correspond to specific sections of the media file. Merely specifying a starting point from which the server successively makes consecutive parts of the media sequence available for download and playback is clearly insufficient (see feature b2). Whether the method can therefore be described as a client-controlled or player-based streaming or playback method does not require a decision. The sole decisive factor is what requirements the patent claim imposes on the client and on the progressive playback of a media sequence by the client.
- 102 In this respect, the concept of a byte range within the meaning of the patent at issue is not fixed to a specific size or number of bytes. The claim also leaves open the question of what specific information the index contains. The client need only be capable of using the index to determine the byte ranges of the media file that are required for the playback of the media sequence from the starting point (feature b2) or in accordance with the user's instructions (feature c). Although the patent at issue describes that fixed-size blocks can be downloaded from the server (paragraphs [0040] and [0042]), this specific embodiment has not been received by the patent claim and is not suitable for interpreting the more general teaching of the patent claim in a restrictive manner. The same applies to the division of the media file into chunks (paragraphs [0051] to [0054]). It is for the person skilled in the art to decide how to organise the identification, requesting and downloading of byte ranges. It does not even appear to be ruled out that the byte ranges to be requested for the same media file may be determined by the client to be of different sizes, depending on the circumstances of the individual case.
- 103 From the wording of the claim (features b3, b_new, b4, c1, c_new) and the fact that byte ranges are placed in a queue (features b_new, c_new), it must in any event be concluded that the client must identify and

retrieve them; consequently, the media sequence is divided into a large number of byte ranges. Bearing in mind that the size of the byte ranges is not fixed, the claim makes it possible, depending on the granularity of the requested byte ranges, to increase the accuracy of trick-play functions, but in particular to reduce the latency associated with downloading a file.

4. Index

- 104 The client determines the required byte ranges in accordance with features b3 and c1 using an index.
- 105 The index is a part of the media file, distinct from the byte ranges to be played back, which indicates the content of the media sequence in such a way that the client can identify the byte ranges required for playback within the media file. This follows from the wording and structure of the patent claim, the description of the patent at issue and the function of the index.
- 106 According to feature (a), the media file contains an index. Conceptually, the index is to be distinguished from the media sequence to be played back and thus constitutes an independent component of the media file. The description also distinguishes between the index, on the one hand, and the data of the media sequence to be played back, on the other (see, for example, paragraphs [0007], [0022], [0050], [0052]).
- 107 This is also necessary because the very function of the index is to enable the client to determine the byte ranges of the media file in order to play the media sequence from the starting point or in accordance with the user's instructions (features b3 and c1). Accordingly, it can be inferred from feature group b that the index must be downloaded in full or at least in part (see paragraph [0052]) before playback of the media sequence can even begin. This is because, without the index, the client cannot determine which byte ranges are required for playback.
- 108 The function of the index also determines what it must achieve in terms of content. It must represent the content of the media sequence in such a way that the client can determine the byte ranges of the media file required for playback (see features b3 and c1). Since the media file and the media sequence to be played back constitute an internally ordered set of bytes, the index may take the form of a list of all byte ranges in the media sequence and the order in which they are to be played back. However, the claim is not limited to this. Since the client merely needs to be enabled to determine byte ranges for playback starting from the start point or the playback position specified by the user, it may suffice for the index to provide the client with information regarding the number of bytes and their internal order – such as the sequence of their storage positions or the like – so that the client can assign a specific byte range to a playback position and query the server for it. In this respect, however, the index must be complete. This is because the technical teaching of the patent at issue is that

the entire media sequence, divided into individual byte ranges, is retrieved from the server and played back by the client, rather than the server sending the media sequence or parts thereof on its own initiative. Merely specifying the length of a media file is therefore insufficient, as without further details it does not allow specific bytes or byte ranges within the media file, corresponding to a playback position, to be identified and retrieved.

5. Request queue

- 109 Once the client has determined, on the basis of the index, the byte ranges required to play the media sequence – whether starting from the beginning or in accordance with the user's instructions (features b3 and c1) – these byte ranges are placed in a request queue (features b_neu, c_neu and d_neu). In the event of a user instruction, the claim further requires that the existing request queue be emptied ('flushed') and re-established (features c_2 and c_new), whereby only those parts of byte ranges that have not already been downloaded are to be included (feature d_new). The required byte ranges are then requested from the server from this queue (features b4, c3 and d3).
- 110 A request queue within the meaning of the patent at issue may be formed by requests for byte ranges which the client has already created but which have not yet been sent to the server. It therefore involves the temporary storage of a series of created requests, which are then sent to the server in a subsequent step (see feature b4).
- 111 The function of the queue referred to in the claim for the protected technical teaching must be understood in the context of the request for and download of the byte ranges for the playback of the media sequence. Instead of downloading the media file in its entirety and linearly from the server to the player, as in the prior art (paragraphs [0002] and [0003]), the media sequence can be divided into a large number of byte ranges which the client can request individually. To do this, a connection must be established from the client to the server (see para. [0043]), via which, on the one hand, the request is sent and, on the other, the download is carried out. Even though the client is capable of opening multiple connections to the server (para. [0044]), sending the byte-range requests and downloading from the server takes longer than generating the requests. Against this background, the request queue—in which the byte range requests are placed until the next request can be sent to the server—becomes clear.
- 112 It is not necessary for such a queue to be implemented at the hardware level, for example by using a FIFO buffer to determine the order of the byte range requests. The defendants allude to such an understanding in their statement of defence, but this must be rejected in the present case. In this respect, it is sufficient for a request queue if several byte-range requests are temporarily stored before being sent to the server and if suitable means ensure that they are

the correct order. How a queue in accordance with the invention is ultimately implemented in terms of hardware and/or software is left to the person skilled in the art.

- 113 Whether, and under what conditions, a request queue in accordance with the patent can also be formed by a list of byte-range requests yet to be generated does not need to be decided at this stage.

6. Methods according to feature groups c and d

- 114 Whilst feature group b describes the initial sequence of the streaming process (receipt of the index, determination of byte ranges, establishment of a request queue, requests for the byte ranges, buffering and playback), feature groups c and d relate to method steps in the event of a user instruction (in particular rewinding, fast forwarding, skipping). It is no longer necessarily the case that byte ranges running consecutively from the start point are required for playback; rather, the byte ranges from the playback position selected by the user or those required for the trickplay function (e.g. when rewinding or fast-forwarding) are needed. Furthermore, the user command may result in the need for byte ranges that have already been downloaded. Feature groups c and d relate to this.
- 115 Feature group d represents a more specific instantiation of feature group c. The procedural steps of both feature groups are interwoven or interlinked. This is evident from the fact that features d2 and d_neu require procedural steps which, like feature group b, are linked to a user instruction, and in particular that feature d_neu, just like feature c_neu, concerns the filling of the queue. Both feature groups conclude with the retrieval of byte ranges from the request queue that are required for media playback in accordance with the user instruction (features c3 and d3).
- 116 Feature groups c and d cannot be understood as separate functions that a client must perform in one playback situation or another. The subject-matter of the patent claim is not the client, but a streaming method. The steps of the method according to the invention are interdependent and build upon one another in order to solve a specific technical problem – in this case: the improved, and in particular largely delay-free, implementation of trick-play functions during the progressive playback of a media sequence. Consequently, it is required that, in a streaming method which, in principle, proceeds in accordance with the method steps of feature group b, all method steps of feature groups c and d are carried out in response to a specific user instruction.
- 117 The interweaving of feature groups c and d must not result in individual method steps being omitted. Only the method steps in features c3 and d3 are identical, whilst feature d_new specifies the step set out in feature c_new in more detail.

other respects, there are procedural steps that are interdependent and must therefore be carried out in a specific order, whilst this is not strictly necessary for other procedural steps. In this respect, steps c1, c2 and d2 must first be completed before the new request queue can be established. However, the claim does not specify whether the request queue is emptied before, after or even simultaneously with the steps set out in features c1 and d2.

a) Feature group c

- 118 Even in the case of a user instruction, the method according to the patent continues in that the client uses the index to determine which byte ranges of the media file are required for playback in accordance with the user instruction (feature c1). As in feature b3, this concerns the byte ranges generally required for playback, not specifically the byte ranges that have not yet been downloaded, as mentioned in feature d_neu. The claim does not define what constitutes a user instruction. Possible examples in this regard include skipping (jumping forwards or backwards in the media file), rewinding or fast-forwarding (see paragraph [0032]).
- 119 According to feature c2, in the event of a user instruction, the request queue is to be emptied (so-called 'flushing').
- 120 The purpose of 'flushing' is to prevent byte ranges from the queue that are not required for the new playback position – or at least not as a priority – from being requested, and to ensure that the byte ranges now actually required are not delayed in being requested (see paragraphs [0047] and [0048]).
- 121 The trigger for emptying the queue is a user instruction. This does not mean that the request queue must always be emptied, without exception, whenever a user instruction is issued. It is also conceivable that the queue is emptied only in response to certain user instructions (e.g. only when 'skipping') or that this depends on further conditions. In this respect, feature d refers only to the receipt of 'a user instruction'. Nor does the patent description preclude this (see paragraphs [0047] and [0048]). However, the further steps of feature groups c and d must also be fulfilled under the same conditions under which the request queue is flushed. This is because feature group d specifies the manner in which the flushed request queue is refilled. Otherwise, this would lead to a fragmentary interpretation of the claim, which is precluded for the reasons set out in the introduction.
- 122 'Flushing' results in none of the byte-range requests placed in the queue remaining valid. All requests are discarded. The patent at issue does not provide for partial flushing, and this would contradict the technical literal meaning of the patent claim. This claim provides no indication of a partial flushing of the

request queue or under what conditions such a flush might take place. The same applies to the description of the patent at issue.

b) Feature group d

- 123 If the request queue has been emptied (feature c2), a new request queue is not simply set up for the byte ranges required in accordance with the user instruction (feature c_new). Instead, in accordance with feature d2, the client must first determine whether at least part of a byte range required to play the media in accordance with the user instructions has already been downloaded. This is because, in accordance with feature d_neu, only those parts of byte ranges that have not yet been downloaded are to be placed in the new request queue.
- 124 These procedural steps go beyond feature group c. Clearing the queue in accordance with feature c2 ensures that no byte ranges are requested which are not required, or not urgently required, for playback in accordance with the user's instructions. By contrast, features d2 and d_neu ensure that even if byte ranges are required for playback in accordance with the user's instructions, they are not requested from the server if they have already been downloaded by the client. These are different functions which are, in principle, technically independent of one another, but which ultimately determine the emptying of the queue and the conditions under which the new queue is established.
- 125 Consequently, not all byte ranges required for playback in accordance with the user's instructions are simply placed in the queue to be created (cf. feature c_neu). Rather, feature d_neu clarifies feature c_neu in that only those parts of byte ranges that have not already been downloaded from the remote server are placed into the request queue (as also stated in paragraph [0043]).
- 126 The patent claim leaves largely open the question of how, in detail, the client determines which (parts of) byte ranges have already been downloaded and which have not. In this respect, it should be noted that feature d2 also merely requires determining whether at least a part of a byte range required for playback has already been downloaded. This is to be done using the mask which the client maintains in accordance with feature c1 and which indicates the parts of the media file that have already been downloaded (more on the mask shortly). In this respect, it would be conceivable that the client compares the byte ranges determined in accordance with feature c1, which are required for playback, byte (range) by byte (range) with the mask to determine whether they have already been downloaded or not. However, the technical teaching of the patent at issue is not limited to this. Nor can it be inferred from the claim that features c1 and d2 are linked in this way, nor does the description of the patent at issue contain any indications as to how the method step according to feature d2 is to be implemented in detail. Rather, this is a matter for the skill and discretion of the person skilled in the art.

127 Consequently, feature d2 merely requires a checking step, at the end of which it is determined whether a byte range or part of a byte range required for playback has already been downloaded, and feature d_neu merely requires that no byte ranges which have already been downloaded and are therefore already available are placed back into the request queue.

7. Mask

128 Having said all this, it remains to be clarified what is meant by a mask which the client maintains in accordance with feature d1 and uses for the procedural step in accordance with feature d2.

a)

129 According to feature d1, the mask must indicate the parts of the media file that have been downloaded and are therefore present in the client's memory. This is intended to enable the client, in accordance with feature d2, to determine whether at least part of a byte range required for playing the media in accordance with the user's instructions has already been downloaded.

130 The rationale for using a mask is that determining which parts of a media file have not yet been downloaded from the server directly on the basis of the parts of the media file stored by the client would be too resource-intensive. Accessing individual byte ranges in memory takes longer than accessing a single data set in the form of a mask representing the downloaded parts of the media file. The patent at issue points out that a complete media file can be several gigabytes in size (para. [0041]). The use of a mask shortens the process and speeds up the identification of byte ranges that have not yet been downloaded. In this respect, the size of the mask itself – which in turn depends on the granularity of the division of the media file into individual byte ranges – can lead to losses in efficiency (see paragraph [0042]).

131 In one embodiment, the patent at issue proposes a bitmap as a mask for the media file, in which each bit corresponds to a block of fixed size within the media file (see [0040]). However, the teaching of the patent at issue is not limited to such an implementation of a mask, as examples of implementation are generally not suitable for justifying a narrow interpretation of a more broadly defined patent claim. The requirement for a bitmap has not been incorporated into the patent claim, nor are there any other indications that could justify such an interpretation. A directory or index, distinct from the media file, may therefore also serve as a mask, enabling the client to determine which parts of a byte range have already been downloaded.

132 Furthermore, as the client maintains the mask, a mask is, in all the above circumstances, a database independent of the stored byte ranges, which allows the client

to track which parts of the media file are present in memory without having to access the storage or the stored byte ranges themselves. Whilst the feature d_neu serves to speed up the download of the byte ranges required for playback by ensuring that existing (parts of) byte ranges are not requested a second time, the features d1 and d2 provide the means to identify the existing byte ranges. In this context, the use of a mask speeds up the process of identifying the (parts of the) byte ranges that have already been downloaded, because the client does not need to access the storage and the byte ranges themselves, but can instead use the mask to identify the downloaded parts of the media file.

b)

- 133 Insofar as the client is to be able to determine, on the basis of the mask, whether at least part of a required byte range has already been downloaded, and is to place in the queue only those parts of a required byte range that have not yet been downloaded (features d2 and d_neu), these parts of byte ranges do not necessarily refer to sub-units or subdivisions of the byte ranges previously identified, requested and received on the basis of the index (features b3, b_neu and b4, and features c1, c_neu and c3 respectively).
- 134 As already mentioned at the outset, the concept of a byte range within the meaning of the patent at issue is not fixed to a specific size or number of bytes. Nor does the index necessarily have to specify byte ranges which the client identifies and requests from the server. Against this background, 'parts of byte ranges' are, in any event, provided they comprise at least one byte, themselves a 'byte range'. This also follows directly from the wording of the claim, according to which, following a user instruction, the client does indeed place only those parts of byte ranges that have not yet been downloaded from the server into the queue (feature d_neu), but byte ranges are then requested from the queue (feature d3). The patent at issue as a whole does not use the terms with clear distinction.
- 135 Therefore, if the client is to use the mask to determine whether at least part of a required byte range has already been downloaded, and is to place in the queue only those parts of byte ranges that have not already been downloaded, it is sufficient for the client simply to identify the byte ranges that have already been downloaded and to place the remaining missing byte ranges in the queue.
- 136 This applies all the more so if the respective byte range is, in any case, always downloaded in full as originally requested (features b4 and c3). The downloading of the byte ranges as such is not the subject of the protected method, and its implementation is a matter for the skill and discretion of a person skilled in the art. Accordingly, it is also possible that the requested byte ranges are downloaded in full throughout, and no distinction can be made between parts of these byte ranges that have already been downloaded and those that have not yet been downloaded. In this sense, the minimum requirement of 'at least a part of a byte range' in

feature d2. Only if the requested byte ranges are downloaded only partially does it matter that the client identifies them using the mask. However, if this is not the case, this does not deviate from the teaching of the patent claim; rather, the point of reference for determining the required byte ranges and their positioning in the queue is then the entire byte range.

137 In this respect, the mask need only display the parts of the media file that have already been downloaded and does not necessarily have to show subdivisions of the byte ranges previously identified and requested by the client. Above all, the mask need not contain, as entries, the individual bytes, blocks of bytes or other subdivisions of downloaded byte ranges. As explained, none of this has been included in the patent claim and is merely the subject of specific embodiments (paragraphs [0040], [0042] and [0044]).

138 By placing only parts of byte ranges that have not yet been downloaded into the queues and requesting them – rather than those that have already been downloaded – both the download volume and the access time until playback of the media sequence begins are further reduced. Even in the context of this function, a distinction between byte ranges and parts of byte ranges is not appropriate, provided that it is ensured that such (parts of) byte ranges that have already been downloaded are not downloaded again. Feature group d does not require anything more than this.

c)

139 In so far as the defendants object that it is not sufficient for the interface merely to specify time ranges of the media sequence which are subsequently converted into byte ranges, this argument cannot be accepted. The wording of the patent claim merely requires that the interface displays parts of the media file that have been downloaded (feature d1). This wording also encompasses time ranges of the media file. It is the client which, using the mask, determines whether a part of a byte range has already been downloaded (feature d2). The patent at issue does not preclude this step from also comprising the conversion of the time ranges into byte ranges.

d)

140 Nor can the defendants' view be accepted that the technical teaching of the patent at issue should be interpreted as precluding, under all conceivable circumstances, the downloading of (parts of) byte ranges that have previously been downloaded from the server.

141 Firstly, the teaching of the patent at issue does not preclude bytes or byte ranges that have already been downloaded and played back from being deleted by the client. For insofar as feature group d relates to parts of the media file or parts of byte ranges that have already been downloaded (features d1 and d2), it is

this is to be understood as meaning that the client actually has access to these parts; in other words, they are still present in memory and do not need to be downloaded from the server again. This must be reflected in the content of the mask, so that the client identifies only those (parts of) byte ranges that are actually present and no longer need to be downloaded. Consequently, all required byte ranges that are not yet or no longer present on the client are placed in the request queue. Accordingly, the client will, on the basis of the mask, only identify such (parts of) byte ranges

C Counterclaim for revocation

142 The counterclaim for revocation is unfounded.

I. Inadmissible extension

143 The patent at issue is not to be annulled pursuant to Article 65(2) of the UPC Agreement in conjunction with Article 138(1)(c) of the EPC: its subject-matter does not extend beyond the content of the application as originally filed.

1. Legal principles

144 The ground for invalidity under Article 138(1)(c) of the EPC reiterates Article 123(2) of the EPC. Accordingly, a European patent application or a European patent must not be amended in such a way that its subject-matter goes beyond the content of the application as originally filed. This means that an amendment must not go beyond what a person skilled in the art would, on the filing date or priority date, objectively derive directly and unambiguously – whether explicitly or implicitly – from the application as a whole in the version originally filed, using general technical knowledge. (The Hague Local Division, Order of 19 June 2024, UPC_CFI_131/2024 – Abbott v Sibio; Central Chamber, Paris, Decision of 5 November 2024, UPC_CFI_309/2023 – NJOY v Juul Labs; Court of Appeal, Order of 14 February 2025, UPC_CoA_382/2024 – Abbott v Sibio).

145 An inadmissible extension therefore exists where the subject-matter of the granted claim goes beyond the content of the application as originally filed. To determine this, the court must first ascertain what information a person skilled in the art, viewed objectively and with reference to the filing date, would immediately and unambiguously derive from the application as a whole, as filed, using their general technical knowledge. In addition to the claims, the description and the drawings must also be taken into account (Court of Appeal, Order of 14 February 2025, UPC_CoA_382/2024 – Abbott v Sibio; Decision of 2 October 2025, CoA_764/2024 – Expert e-Commerce v Seoul Viosys; judgement of 25 November 2025, UPC_CoA_528/2024 – Amgen v Sanofi). Implicitly disclosed subject-matter is also to be regarded as part of the content, i.e. that which clearly and unambiguously follows from the expressly

(Court of Appeal, decision of 2 October 2025, CoA_764/2024 – Expert e-Commerce v Seoul Viosys). It is not necessary for the granted claim to reproduce the wording of the disclosure in the patent application if and to the extent that a person skilled in the art can deduce the claimed combination of features from the application in its entirety (Court of Appeal, decision of 14 February 2025, UPC_CoA_382/2024 – Abbott v Sibio). In the case of a patent arising from a divisional application, this requirement applies to each earlier application. The subject-matter of the granted claim 1 must therefore not go beyond (1) the disclosure of the originally filed application for the patent at issue and (2) the disclosure of the original PCT application which has entered the regional phase and constitutes the parent application of the divisional application (Court of Appeal, decision of 2 October 2025, CoA_764/2024 – Expert e-Commerce v Seoul Viosys).

2. Application to the present case

- 146 The subject-matter of patent claim 1 of the patent at issue does not extend beyond the content of the European parent application EP 2 122 482, arising from the international application PCT/US2008/050440 with publication number WO 2008/086313 A1 (submitted as Annex QE 2), nor beyond the content of the divisional application (submitted as Annex QE 1). The parent application and the divisional application are identical in the passages relevant here, so that no separate consideration is required. For the sake of simplicity, only the parent application is referred to below.
- 147 An inadmissible extension is not caused either by the inclusion of feature b_neu in claim 1 of the patent at issue, nor by the limitation of the process steps to features b_neu and b4.
- 148 The features b_neu and b4 are disclosed directly and unambiguously in paragraphs [0018] and [0051] of the parent application. These state, first of all, that, in one embodiment of the invention, the client is configured to manage a queue containing requested sections of the media file (para. [0018] of the parent application). This is explained in more detail in paragraph [0051]. According to this, the download manager establishes a connection with the remote server, the requested byte range is placed in a request queue and subsequently requested (paragraph [0051] of the parent application). This explicitly discloses feature b_neu, as the client places the previously determined byte ranges into a request queue, and likewise feature b4, as the byte ranges are requested from the server via the queue.
- 149 The defendant contends that the teaching of the parent application has been generalised in an impermissible manner, because the check as to whether parts of byte ranges have already been downloaded before byte ranges are placed in the request queue was not included in feature group b. The court cannot agree with this view.

- 150 It is true that paragraph [0051] of the parent application goes on to state that, as soon as further byte ranges are received, the process checks whether bytes from a requested byte range have already been downloaded, and places only those parts of the byte range that have not yet been downloaded into the request queue.
- 151 According to the case law of the UPC Court of Appeal, not all features of an embodiment need to be included in the claim. In any event, where the original application contains no technical indications to the contrary and the omitted feature is not objectively necessary for achieving the object of the invention by means of the other feature, the isolated inclusion of that other feature is permissible (Court of Appeal, Order of 14 February 2025, CoA_382/2024 – Abbott v Sibio).
- 152 This is also the case here, because the function and purpose of the queue – to reduce delays in requesting byte ranges from the server – are independent of the check as to whether the required byte ranges have already been downloaded. Whilst the check as to whether the required byte ranges have already been downloaded does, in effect, also serve to speed up the download of the byte ranges, the establishment and maintenance of the request queue is independent of the specific question of which byte ranges are placed in the queue and subsequently requested.
- 153 Notwithstanding this, it is immediately and clearly apparent to a person skilled in the art at the priority date that the check as to whether the identified byte ranges have already been downloaded is not a prerequisite for determining which byte ranges are placed in the request queue. Paragraph [0051] of the parent application does not require that such a check always take place. Instead, it states that, as soon as further byte ranges are received, the process checks whether bytes from a requested byte range have already been downloaded. (“As more byte ranges are received [...]”) The check is therefore not carried out from the outset, but only from an unspecified point in time after several byte ranges have been received. This implies that the check is dependent on a further condition.
- 154 It is also immediately and clearly apparent to a person skilled in the art that the check does not take place from the outset when the first byte ranges are downloaded, because at that point there are not yet any bytes present whose existence could be determined. This applies whenever the media sequence is played back for the first time, starting from the beginning. Only in the event of a user instruction may the media sequence be played from a point for which byte ranges have already been downloaded. In such cases, a corresponding check is appropriate in order to avoid multiple downloads. This is precisely what claim 1 of the patent at issue requires, because, in accordance with feature d2, the client determines, in the event of a user instruction, which parts of byte ranges have already been downloaded on the basis of the screen. The claim therefore merely reflects what is already set out in the patent application.

II. Novelty

155 The patent at issue is to be declared invalid within the scope of its claim 1 pursuant to Article 65(2) of the UPC Agreement in conjunction with Article 138(1)(a) of the EPC, on the grounds of lack of novelty.

156 The technical teaching of claim 1, as well as that of the other dependent claims of the patent at issue, is deemed to be novel within the meaning of Article 54(1) of the EPC in relation to the article 'Interactive Browsing of 3D Environment over the Internet' by Cha Zhang and Jin Li, published in 2000 (and thus prior to the priority date of the patent at issue) in the specialist journal 'SPIE Visual Communication and Image Processing', Volume 4310, Issue No. 51 (submitted as Annex D10)

1. Legal principles

157 The assessment of novelty within the meaning of Article 54(1) of the EPC requires a determination of the overall content of the prior publication. The decisive factor is whether the subject-matter of the patent in question, with all its features, is directly and unambiguously disclosed in the prior art (see Court of Appeal, Order of 26 February 2024, UPC_CoA_335/2023 – NanoString Technologies v 10x Genomics; Order of 25 September 2024, CoA_182/2024 – Mammot Sports v Ortovox).

2. Application in the present case in relation to D 10

158 In accordance with these principles, the subject-matter of the patent at issue is found to be novel in relation to D 10.

a)

159 D10 relates to interactive browsing in three-dimensional ('3D') environments. D10 describes such 3D environments as a 'concentric mosaic' of individual images, which are stored in the so-called 'Reference Block Coder (RBC)' format. To capture the environment, a camera is mounted at the end of a horizontal support and records a large number of images whilst the support rotates. The data set of the concentric mosaic is then compressed by the RBC. A rendering function accesses only a portion of the RBC bitstream for each virtual view, decodes it and renders it.

160 The images are encoded separately as A-frames and P-frames ('anchor frames' and 'predicted frames') in macroblocks – A-frames independently and P-frames predictively based on A-frames – and grouped into macroblock groups ('MBG'), similar to MPEG encoding. The resulting bitstream is provided with an index structure consisting of an information header, a preview image of the surrounding panorama in the form of an A-frame, a compressed global motion vector and a two-level index table, so that the individual MBGs can be accessed arbitrarily.

161 In addition to the RBC format, the D10 standard also specifies an access protocol known as the Vmedia Protocol ('Virtual Media Access protocol'). This enables flexible downloading and playback of the 3D environment within a browser implementation by accessing only that part of the bitstream which relates to the current field of view of the image. Via the Vmedia client, the application can access media segments which are transmitted on request by the Vmedia server. The transmitted bitstream segments are managed by a local Vmedia cache, so that frequently used bitstream segments do not need to be streamed repeatedly over the internet, and Vmedia is able to process an RBC bitstream that is larger than its storage capacity. Therefore, before sending a request to the server, Vmedia checks whether the requested media segment is already in the cache. If this is the case, the content is returned to the requesting application. If not, a network request is queued to stream the missing segment from the Vmedia server.

162 Using an interactive Vmedia browser, the user can move freely within the 3D environment, for example by rotating or moving forwards, backwards or sideways. To display the current view, the browser repeatedly accesses the available bitstream segments, decodes them and renders the current view. At each step of the iteration, the browser renders a current view based on the available bitstream segments. If none of the bitstream segments are available at the start, an empty view is rendered. As soon as some bitstream segments arrive, the corresponding A- or P-frame MBGs are decoded, and the slits in the MBGs are rendered in the view. Missing slits are rendered as blank areas. Once the part of the bitstream required for the current view has been fully transmitted, the view can be rendered in full.

b)

163 Citation D10 does not disclose feature a or the features associated with the playback of a media sequence (features b2, b3, b4, b6, c1, c3, d2, d_neu). This is because it does not disclose a method for the progressive playback of a media sequence within the meaning of feature a of claim 1 of the patent at issue.

164 As explained in the context of the interpretation, a media sequence within the meaning of the patent at issue is characterised by the implicit temporal order of the bytes required for its display and, accordingly, the media content is characterised by the temporal sequence and duration of its playback and perception, as is the case, for example, with a video or an audio recording. Accordingly, the method according to claim 1 serves to continuously play back a medium, characterised by the temporal sequence and duration of its playback and perception, on a user device whilst the medium, stored as a file on a remote server, is still being downloaded.

165 However, prior art document D10 does not relate to a method for playing back such a media sequence, but rather to a method for the static display of a section of a

panoramic image. The mere fact that the download of the necessary image data and the rendering of the image section take a certain amount of time, during which the image section can already be displayed in low resolution or even only partially, and can be progressively improved as further image data is received, does not make the structure of the image display according to D10 a progressive playback of a media sequence ('progressive playback') within the meaning of feature a.

166 The RBC-encoded A-frames and P-frames are stored on the Vmedia server in no particular order with regard to the chronological sequence of their recording or their potential playback. This is already apparent from Figure 5 of D 10, according to which A-frames and P-frames are stored separately from one another. Once they have been encoded and stored, there is no temporal relationship whatsoever between the various frames, as would be required for a media sequence within the meaning of feature a. There may be a spatial relationship between the frames in the sense that, for a particular view of the concentric mosaic, certain A and B frames are required, from which the client then renders the current view. Any temporal sequence of these images, which may have existed at the time they were captured, is lost upon their encoding and storage. Consequently, the display of a current section of the concentric mosaic is not characterised by the duration of its playback and perception.

167 The fact that Citation D 10 deals at all with displaying sections of a concentric mosaic whilst the image data is still being downloaded from the server is due to the fact that the download of the image data and the rendering process itself take a certain amount of time. The duration of the image build-up depends largely on the download speed, which is determined by the server and the network, and on the processing speed of the client, and is therefore variable. By contrast, for a streaming method according to the patent in suit, the duration results from the playback of the content of the media sequence itself. Even a complete download would not speed up the playback of the media content. It is precisely this that is expressed by the term 'progressive playback' – in the sense of continuous playback – of a media sequence in accordance with feature (a) of the patent claim. What is played back are the fully decoded video frames in their chronological order and not – as in D 10 – a low-resolution or partial representation of a frame, the quality of which gradually improves as the rendering process progresses.

168 Even if individual technical features and functions of D 10 were to be similar to those of the streaming method according to the patent at issue, D 10 does not disclose the playback of a media sequence.

III. Inventive step

169 Furthermore, the patent at issue is not to be declared invalid within the scope of its claim 1 pursuant to Article 65(2) of the UPC Agreement in conjunction with Article 138(1)(a) of the EPC on the grounds of lack of inventive step within the meaning of Article 56

of the EPC. The technical teaching claimed by the patent at issue is to be regarded as involving an inventive step in accordance with Article 56 of the EPC.

1. Legal principles

- 170 Under Article 56 EPC, an invention is deemed to involve an inventive step if it does not follow in an obvious manner from the state of the art for a person skilled in the art. This is always a matter to be assessed on a case-by-case basis and requires an examination taking into account all relevant facts and circumstances.
- 171 The approach of the Unified Patent Court in determining the level of inventive step is as follows (Court of Appeal, decision of 25 November 2025, UPC_CoA_528/2024 and UPC_CFI_529/2024 – Sanofi v Amgen; UPC_CoA_21/25 – Merill v Edwards; Munich Regional Court, decision of 16 July 2024, UPC_CFI_1/2023; decision of 17 October 2024, UPC_CFI_252/2023; Paris Regional Court, decision of 5 November 2024, UPC_CFI_315/2024; Decision of 26 December 2024, UPC_CFI_338/2023, UPC_CFI_410/2023; LD Court, decision of 10 October 2024, UPC_CFI_363/2023; decision of 10 April 2025, UPC_CFI_50/2024; LD Mannheim, decision of 31 January 2025, UPC_CFI_340/2023; LD Munich (Panel 2), 22 August 2025, UPC_CFI_248/2024 – Brita/Aquashield):
- 172 First, it must be determined what the subject-matter of the invention is, that is to say, the objective problem. To avoid a retrospective assessment, the objective problem should not contain any references to the claimed solution. This must be assessed from the perspective of a person skilled in the art, with their general technical knowledge, at the time of filing or the priority date of the patent. It must be determined what the invention contributes to the state of the art, not by considering the individual features of the claims, but by considering the claim as a whole, taking into account the description and the drawings. In doing so, account must also be taken of the inventive concept of the invention (the technical teaching), which must be based on the technical effect(s) which, in the mind of a person skilled in the art, are achieved by the claimed invention on the basis of the patent specification.
- 173 The claimed solution is obvious if the person skilled in the art, who would have sought to solve the objective problem, would have arrived at the claimed solution (and not merely could have arrived at it) at the relevant time, starting from a realistic starting point within the state of the art in the relevant technical field. The relevant technical field is the field that is relevant to the objective problem to be solved, as well as any field in which the same or a similar problem arises and of which the person skilled in the art in that specific field must be expected to be aware.
- 174 A starting point is realistic if its teaching would have been of interest to a person skilled in the art who, at the relevant time, would have sought to solve the objective problem. This may be the case, for example, where the relevant prior art already

discloses several features similar to those of the claimed invention and/or relates to the same or a similar underlying problem as the claimed invention. There may be more than one realistic starting point, and the claimed invention must be inventive in relation to each of these starting points.

175 The person skilled in the art lacks inventive ability and imagination and requires a hint or motivation which, starting from a realistic point of departure, prompts them to take the next step towards the claimed invention. As a general rule, a claimed solution is to be regarded as non-inventive or obvious if the person skilled in the art would take the next step on the basis of the hint or as a matter of routine and arrive at the claimed invention.

176 The burden of proof lies with the claimant in the nullity proceedings.

2. D 10 with technical knowledge

177 Against this background, the technical teaching of claim 1 of the patent at issue is not suggested by D 10 in combination with general technical knowledge.

178 The defendants have not even addressed the individual requirements for the claimed technical teaching to be obvious, as set out by the Court of Appeal and outlined in the introduction. The mere argument that central features of the patent claim are disclosed in D 10 and that implementation details specified in the claim could not, from the outset, establish sufficient inventive step is not sufficient for this purpose. It was only in relation to the first auxiliary claim that the defendants made further submissions on inventive step based on D 10. Ultimately, these arguments are also unconvincing.

179 Starting from the premise that D 10 does not, in principle, relate to a method for the progressive playback of a media sequence within the meaning of feature a, it is not at all clear why D 10 should constitute a realistic starting point in the relevant technical field from which to arrive at the claimed solution.

180 The objective technical problem underlying the patent at issue consists in improving the progressive playback of media content located on remote servers, in particular in playing back larger media files stably and flexibly without significant access delays, i.e. including the use of 'trick play' functions. A technical article such as D 10, which in principle relates to a different method—namely the storage, retrieval, rendering and display of sections of a panoramic image—would not have constituted a realistic starting point for a person skilled in the art, even if individual method steps were identical to those of the claimed technical teaching, because that person would have been seeking a solution for a different method concerning the progressive playback of a media sequence.

181 Nor can the technical problem be formulated retrospectively with reference to D 10 in such a way as to render the method disclosed in D 10 applicable to the playback of other media, in particular films or videos (as, however, the defendants argue on page 75 of their defence to the application for amendment of the patent dated 9 February 2026). This is because it does not correspond to the approach taken by a person skilled in the art. Rather, this approach already incorporates parts of the solution into the technical problem in an impermissible manner and is therefore ultimately based on a retrospective analysis. The fact that D 10, moreover, concerns similar issues (retrieval, storage and playback of bitstreams with limited transmission capacities by means of a multimedia transmission protocol) does not lead to a different conclusion, given the general nature of these issues.

3. D 1 together with D 10, D 11, D 9

182 Nor is the technical teaching of claim 1 of the patent at issue suggested by US 2004/0034870 A1 (submitted as Annex D 1) in combination with D 10, the patent application WO 2006/130964 A1 (submitted as Annex D 11) or the patent application WO 94/24625 (submitted as Annex D 9).

a) Subject-matter of D 1

183 D 1 relates generally to the provision and processing of streaming data and, more specifically, to a system and a method for efficiently streaming, storing and playing back video-on-demand with interactive functions such as pause, fast-forward and rewind (paragraph [0002] of D 1). Two channels are provided to enable the video data to be streamed from a server to a client. Via a communication channel (COM channel), the client sends requests to the server; in response, the server transmits streaming data via a transmission channel (media channel). The client sets up a media file for archiving received data and a global list to identify all data available in the media file. A monitoring thread tracks the global list to identify data required for playback that is not yet available, to detect impending data gaps, to merge entries in the global list for contiguous blocks of available data, and to determine any remaining data that is not yet available. The client requests the data that is not yet available from the server until the media file is complete. A client-side player with a graphical user interface enables functions such as 'Pause', 'Stop', 'Play', 'Fast-forward', 'Skip' (scrolling) and 'Rewind' (paras. [0008] and [0009] of D1).

184 Among other things, D1 discloses an embodiment in which, if the video requested by the client is available as a file, the server begins streaming the video data via the media channel. Upon receipt of the first video data packet, the client sends a request to the server via the COM channel to obtain a packet containing the 'end offset' of the file, thereby identifying the last independent frame (i.e. I-frame) of the file

up to which a fast-forward (or jump forward) can be performed. According to D 1, the client receives indexing information for the file via the first and last packets. As soon as the client has received the packet containing the end offset of the video file via the media channel, the client creates the media file to the size of the video file, whereby it can determine the size of the video file from the first packet, and stores the first packet at the start of the media file and the packet containing the 'end offset' near the end of the media file, leaving sufficient space for subsequent frames that still depend on the last I-frame (paragraphs [0029], [0030] and Fig. 3 of D 1).

- 185 When the client receives the first media packet, it also enters the value zero under 'from offset ID' and the number of bytes received under 'to offset ID'. This indicates that the data from 'from offset ID' to 'to offset ID' is present on the client (paragraphs [0032] of D 1). If the user then jumps to a position within the media file, the monitoring process simultaneously checks whether the client has sufficient data to play the video from the new position onwards. If this is not the case, the client sends a request to the server to send data immediately following the last currently available data chunk ('to offset ID'), and then waits for the new data (paragraph [0034] of D 1).
- 186 If the user jumps to a position in the media file for which no data is yet available, the client sends a request to the server to send data from that position to the next available data position. Once the data for the new position has been received, a new entry is made in the global list, specifying the values 'from offset ID' and 'to offset ID', and playback of the media file continues. If further data is received for subsequent positions, the value 'to offset ID' is updated (paragraph [0035] of D 1).
- 187 Furthermore, D 1 discloses that the client also monitors the integration of newly available data with existing data, the buffer's fill level, or gaps in the existing data, based on a position selected by the user. In the latter case, it requests the relevant media data from the server (paragraphs [0036] to [0038] of D 1).
- 188 D 1 describes the conceptual implementation, with reference to Figure 4, in such a way that a user can jump to a specific position in the media file. The client determines whether the desired data is available before jumping to the target position in the media file. This involves, for example, determining the current offset ID based on the current media position and then determining the data offset required to jump to the new position. Next, the global list is searched to determine whether the data offset for the new position corresponds to available data. If the target data is not available, the client sends a request to the server to begin transferring data corresponding to an independently decodable frame (e.g. an I-frame) at or near the target position (e.g. the I-frame at the

target position or the first I-frame immediately following it, if the target position does not correspond to an I-frame) (para. [0040] of D 1).

b) Disclosed features

189 It is undisputed between the parties that D 1 does not disclose the use, emptying and querying of a queue and, to that extent, does not disclose the queue-related features b_neu, b4, c2, c_neu, c3, d_neu and d3. Furthermore, D 1 also fails to disclose the determination and requesting of byte ranges at the start of playback of the media sequence in accordance with features b3 and b4, nor does it disclose the determination of byte ranges using an index in accordance with features b3 and c1. Against this background, the technical teaching of the patent at issue is not suggested by the prior art.

aa)

190 D 1 does not disclose features b3 and b4. According to D 1, no byte ranges are determined or requested by the client for the initial playback of the video stream.

191 In general, D 1 describes the start of playback of a video stream as follows: initially, an authorised client sends a request for a video to the server via the COM channel and, if the video is available, the server begins to send the video data via the media channel (paragraph [0029] of D 1). There is no mention here of a byte range being identified and requested by the server.

192 The same applies in connection with the description of the monitoring process in paragraph [0033] of D 1 and in the case of a user instruction in accordance with paragraph [0034] of D 1 in the form of a jump to a section for which media data is already available on the client. In both cases, the monitoring process checks whether there is sufficient data in the buffer (paragraph [0033] of D 1) or sufficient data to continue playback (paragraph [0034] of D 1). If this is not the case, the client sends a request to the server to begin sending data immediately following the last currently available data chunk and then waits to receive the data (paragraphs [0033] and [0034] of D 1). The client therefore sends the server, at most, the starting point within the media file from which bytes or chunks of the media file are to be provided ('to offset ID', cf. paragraphs [0033] and [0034]). A completed section of the media file is not requested. This is the general principle underlying D 1 and is also illustrated in the figures of D 1, in particular for the trickplay functions 'Forward', 'Rewind' and 'Jump' (Figures 9, 10 and 11, with reference to steps C1 and C1.1 in Figures 21 and 22) when there are no further downloaded bytes beyond the new playback position.

bb)

193 However, D 1 discloses the determination and requesting of byte ranges by the client in accordance with features c1, c3, d2 and d3, namely when the user jumps to positions in the media file for which no data is yet available to the client (paragraph [0035]

of D 1), or when gaps in the data already downloaded are to be filled (paragraphs [0039] and [0043] of D 1). In these cases, D 1 describes how the client sends a request to the server to send data starting from the first unavailable data position up to the data position immediately preceding the next available data (paragraphs [0035] and [0043] of D 1). Here, the client requests a range of the media file specified by the start and end positions, or the first and last data chunks of unavailable data.

194 It further follows from D 1 that the requested ranges are byte ranges, meaning that, in this respect at least, features c1 and c3, d2 and d3 are disclosed. This is because the client, in particular the monitoring process (paragraphs [0033] and [0034] of D 1), determines the missing data on the basis of the global list (see paragraphs [0033], [0040] and [0043] of D 1). The global list, with its entries for the values 'from offset id' and 'to offset id', contains the number of bytes received, i.e. those available to the client (paragraphs [0032] of D 1). It is immediately apparent to a person skilled in the art that, when the client requests the server to send data from the last available chunk to the last unavailable chunk (paragraphs [0039] and [0043] of D 1), it is requesting precisely those missing bytes that result from the global list (see also paragraph [0034], where reference is made specifically to the 'to offset ID' value).

cc)

195 However, D 1 does not disclose that any byte specifications in server requests – be it the starting byte for sending data or a byte range to be sent – are determined using an index in accordance with features b3 and c1.

196 D 1 does not disclose an index within the meaning of the patent at issue. Although it does mention indexing information in one place (paragraph [0029] of D 1), this does not constitute an index in accordance with features a, b1, b3 and c1 of claim 1.

197 According to the description of D 1, the streaming of the media file by the server begins when the video file for the video requested by a client is available (paragraph [0029] of D 1). At this point, the client has neither specified any byte ranges nor does it have an index at its disposal by means of which it can determine such byte ranges.

198 Furthermore, D 1 discloses that, once the client has received the first video data packet from the server at the start of streaming, it requests a packet containing the 'end offset' of the file, thereby identifying the last independent frame (i.e. I-frame) of the file to which the user can jump (paragraph [0029] of D 1). When it is stated in this context that these packets contain indexing information for the file ('These packets thus contain indexing information for the file', paragraph [0029] of D 1), this does not constitute an index within the meaning of the patent at issue. The information is neither provided to the client independently of the video data packets to be played back, nor does it in any way indicate the content of the video file.

- 199 The packet containing the 'end offset' of the file is not a packet containing an index, but a video data packet which, upon receipt, the client stores in a media file it has created, corresponding to the size of the video file. In doing so, the first packet is stored at the beginning of the media file and the packet containing the 'end offset' is stored near the end of the media file, whilst leaving sufficient storage space for subsequent frames that depend on this packet. The size of the media file is determined from the first video data packet (paragraph [0030] of D 1). The latter is possible, for example, if all video data packets are of the same size and the number of video data packets in a file is known. In this respect, the indexing information mentioned in paragraph [0029] of D 1 could be limited to the number of a video data packet. Such numbering of the video data packets seems sensible because the client must be able to store and play back the incoming video data packets – which, depending on the server request, may originate from different sections of the video file – in the correct order. However, the data packet containing the 'end offset' does not represent the last data packet of the video file, meaning that the exact size of the media file cannot be determined without further information. Consequently, D 1 merely states that the 'end offset' packet is stored near the end of the media file and that sufficient storage space is left for subsequent frames.
- 200 D 1 does not describe in detail what information the client receives via the 'End-Offset' packet. Although the individual number of a video data packet may constitute indexing information for that particular data packet, it does not, in any event, constitute an index of an entire media file within the meaning of the patent at issue. D 1 therefore does not directly and unambiguously disclose that the media file contains an index which the client uses to determine byte ranges.
- 201 Accordingly, the client of D 1 determines the byte specifications and byte ranges solely on the basis of the global list which it has set up and manages in order to record available and empty data chunks (paragraph [0031] of D 1). This global list may constitute a mask within the meaning of feature group d, but does not represent an index in accordance with features a, b1, b3 and c1.
- 202 Nor does anything to the contrary emerge from Figure 6, which, like the other figures, depicts a flowchart that conceptually illustrates, by way of example, the steps of a streaming method according to D 1. Accordingly, in its response to the client's first request to stream a video, the server communicates the length of the media file. However, the mere length of the media file does not constitute an index within the meaning of features a and b1.
- 203 Finally, it cannot be inferred from paragraph [0040] of D 1 that the client uses an index within the meaning of the patent at issue. It is not directly and unambiguously disclosed that the client knows the position of independently decodable frames (I-frames) within the media file and requests precisely the byte range in which the I-frame is located. The client

checks, at most, against the global list to see whether the data offset of the new position corresponds to available data. If this is not the case, it sends a request to the server to begin sending data corresponding to an independently decodable frame at or near the target position (“... request to the server to begin sending data corresponding to an independently decodable frame (e.g., an I-frame) at or near the targeted position ...”, paragraph [0040] of D 1). It does not necessarily follow from this that the client identifies an I-frame and specifies it as the target position. Since it is not disclosed that the client has any further information about the media file apart from the global list, it is entirely possible that the server checks of its own accord whether the bytes requested from the target position onwards begin with an independently decodable frame or not, and, if applicable, sends data beginning with such a frame, even if it does not correspond exactly to the requested target position. This does not preclude the teaching of the patent at issue.

204 Nothing to the contrary follows from the fact that the use of I-frames is described for the ‘fast forwarding’ and ‘fast rewinding’ functions in D 1 (paragraph [0041] of D 1). This is because it is not directly and unambiguously disclosed whether and what information is available to the client, in particular whether it has an index by means of which it could identify the I-frames.

dd)

205 It is undisputed between the parties that D 1 does not disclose a request queue into which byte ranges are placed in accordance with features b_neu, c_neu and d_neu, and from which they are requested from the server in accordance with features b4, c3 and d3. Nor is the deletion of the request queue in accordance with feature c2 disclosed.

c) Realistic starting point and problem

206 It is undisputed between the parties that D 1 constitutes a realistic starting point for solving the technical problem identified in the interpretation, namely to improve the progressive playback of media content located on remote servers, in particular to play back larger media files stably and flexibly without significant access delays, i.e. including the use of ‘trick play’ functions. This is because D 1 relates to the same technical field, namely the progressive playback of media sequences, and also addresses the problem of providing a system and a method for the efficient streaming, storage and playback of video-on-demand streaming with interactive functions such as pause, fast-forward and rewind (paragraph [0004] of D 1).

d) Combination with D 10

207 The technical teaching of claim 1 of the patent at issue is not suggested by a combination of D 1 and D 10. The person skilled in the art does not have the necessary motivation for all the steps required to arrive at the solution according to the invention.

aa)

- 208 It has not been demonstrated, nor is it otherwise apparent, why the person skilled in the art should be prompted, instead of instructing the server to begin sending missing data from a specific byte position, to now send several requests for byte ranges to the server.
- 209 The fact that D 1 discloses the sending of byte-range requests in certain cases does not in itself constitute a motivation for the person skilled in the art to design the entire streaming method of D 1 in such a way that the client only requests individual byte ranges from the server. The streaming method of D 1 is fundamentally designed such that the client triggers the transmission of the media data by sending a request to the server. Specific byte ranges are requested, if at all, when the user jumps to a position for which no media data is available (see paragraph [0035] of D 1), or when gaps in the available data are to be filled (paragraphs [0039] and [0043] of D 1).
- 210 There is no indication in D 1 that the streaming method of D 1, in which, at the outset, only requests are sent to the server to transmit media data from a specific byte position, is disadvantageous or requires further development in any way. Nor has it been argued, nor is it otherwise apparent, that the person skilled in the art is aware of any advantages arising from dividing the media file into byte ranges and requesting these individual byte ranges.
- 211 In this context, D 1 and D 10 pursue different streaming concepts. There is no need to decide whether, and to what extent, one or the other approach is client- or server-controlled and permits a stateless connection to the server. It cannot be ruled out that, in this respect, the streaming methods of both prior art documents are similar and permit a stateless connection, because in D 1, too, the client can use the global list to keep track of which bytes are already available to it and which are not. However, this raises the question all the more: on the basis of D 1, what motivation would a person skilled in the art have to modify D 1 so that it now only requests byte ranges from the server?
- 212 In its reasoned notice of 3 July 2026 in the opposition proceedings concerning the patent at issue, the Opposition Division took the view that it would be an obvious design option to use several smaller byte-range requests even when the media file is being played from the start, in order to better adapt the data flow to the client's requirements and the user's instructions. (see section 12.13.2 of Annex WKS 11). In the absence of any other submissions, however, it cannot be assumed that the submission of a large number of byte-range requests forms part of the general technical knowledge of a person skilled in the art, nor that the advantages associated with such an approach are generally known within the relevant technical circles. Nor does the

Opposition Division makes no comment whatsoever on how the person skilled in the art is supposed to arrive at these considerations without any external guidance.

213 Against this background, the reference to D 10 and the application of the streaming protocol disclosed therein to D 1 – and consequently the use of byte-range requests for the entire streaming process – appear to be based on hindsight.

bb)

214 Furthermore, the exclusive use of byte-range requests in a streaming method of D 1 does not mean that the client of D 1 uses an index—which forms part of the media file and is sent to it by the server before playback begins—to determine the byte ranges. It is not apparent why a person skilled in the art would provide such an index, even if the client were to consistently issue byte-range requests instead of merely transmitting byte positions for the start of data transmission.

215 In fact, there is no reason to provide for such an index, because the client itself creates a media file and a global list on the basis of the communicated file length or the first media data packet and the packet containing the media data comprising the last independent frame; these could serve as the basis for submitting byte range requests to the server.

216 Here, too, it is evident that D 1 essentially follows a slightly different streaming concept and that, without further indication, there is no reason for a person skilled in the art to redesign it in accordance with the teaching of the patent at issue.

cc)

217 Finally, the person skilled in the art had no reason to implement a queue with all the details disclosed in D 10 for the streaming method disclosed in D 1 – at any rate, not a queue that is deleted in response to a user command. Accordingly, at least feature c_2 is not suggested.

(1)

218 As explained in the context of the interpretation, the function of the request queue claimed in claim 1 of the patent at issue is to reduce the delays associated with creating and sending the plurality of byte-range requests and with downloading these byte ranges. Since sending the byte-range requests and downloading from the server takes longer than creating the requests, further byte ranges or byte-range requests can be placed in the request queue until the next request can be sent to the server. Accordingly, the purpose of clearing the request queue in feature c2 is to stop sending requests to the server, thereby reducing delays for new byte-range requests that become necessary as a result of the user's instruction.

- 219 It cannot be ruled out that a person skilled in the art examining D 1 may recognise that multiple byte-range requests may occur simultaneously. However, this is not yet the case when the client requests a video from the server and begins playback of the stream after the first media data has been transferred (paragraph [0030] of D 1), as only a single request is required for this. The same applies to jumps within the media file, as this also triggers only a single request to the server to begin sending media data from the last available data chunk (paragraph [0034] of D 1) or from the skip position outside the available data to the next available data position (paragraph [0035] of D 1) (see also paragraph [0040] of D 1).
- 220 However, a situation where several server requests coincide could arise if the client attempts to fill gaps in the available data. As multiple jumps or fast-forwarding can result in several gaps in the available data, a corresponding server request is required to fill each of these gaps. This follows directly from paragraph [0044] of D 1, according to which the retrieval and transmission of the missing byte range may be repeated until the video file is fully stored on the server.
- 221 This provides the person skilled in the art with sufficient reason to seek solutions or further developments. This is because the person skilled in the art is faced with the fundamental question of how to proceed when there are several gaps in the available data and several byte-range requests must be generated and sent to the server.
- 222 Whether the expert would have resorted to D 10 for this purpose is ultimately irrelevant. This is because the implementation of a request queue is an obvious option for the expert. Queues and the possibility of reducing delays in generating and sending server requests by implementing a request queue are, in principle, known to the expert from the prior art. In particular, a queue is also used in D 10 to process media segment requests without delay. Consequently, there is strong evidence to suggest that the use of a queue is suggested for the streaming method of D 1.

(2)

- 223 However, it is not apparent, nor has it been argued, why the person skilled in the art should implement a request queue which is emptied again in the event of a user instruction, as provided for by feature c2. It cannot be ruled out that byte ranges may be required for the playback of the media sequence in accordance with the user's instruction, for which a byte range request is already present in the queue. In this respect, there is no reason to delete this byte range request.

- 224 Furthermore, the method according to D 1 is aimed at ultimately transferring the entire media file from the server to the client (see paragraphs [0005] and [0006] of D 1: 'transmitting, storing [...] video data stream for playback upon receipt and/or at a later time'). Consequently, in the embodiment, the client also creates a media file in which all media data received from the server is stored until the video file has been downloaded in full (paragraphs [0030] and [0043] of D 1). Filling gaps in the video data available to the client (see paragraphs [0038], [00342] and [0043] of D 1) is specifically intended to ensure that the video file is received in full from the server.
- 225 Against this background, it does not seem sensible to remove byte range requests that have already been created from the queue in the event of a user instruction, as the missing byte ranges will have to be requested from the server at some point anyway. This does not rule out the possibility of a conflict arising between several byte-range requests if a user instruction results in individual byte ranges being required more urgently for the current playback than other byte ranges for which requests are already in the queue. From the perspective of a person skilled in the art, however, it would seem more appropriate in such a case simply to change the priority of the byte-range requests rather than to delete the requests entirely. In any event, it has not been argued, nor is it apparent, what motivation a person skilled in the art would have to implement a request queue that is completely emptied following a user instruction.
- 226 The fact that D 10 has implemented a queue which corresponds to feature c2 does not lead to a different conclusion. This is because the need to empty the queue in D 10 arises from the fact that, in D 10, neither the entire panoramic view is downloaded nor is a media sequence within the meaning of feature a played back; rather, only a section of a concentric mosaic is to be displayed. Every user command in D 10 results in a different view, for which fundamentally different media segments must be downloaded. Against this background, it does indeed seem justified to completely clear the queue in D 10 in response to a user command, even if the new view requires individual media segments that should already have been requested for the previous view. However, this does not fit – or at least not without further reasoning – with the streaming concept of D 1, which is designed to download the entire media file to the client.
- 227 Nor does anything else follow from the detailed note from the Opposition Division at the EPO dated 3 July 2026 (Annex WKS 11, section 12.14.3 therein). The Opposition Division does not address the question of what prompted the person skilled in the art to implement a queue that is deleted again following a user instruction. It merely states succinctly that the person skilled in the art would consider introducing queues as a solution to the technical problem in order to process byte-range requests, and to empty them when they are no longer required. However, the latter cannot be assumed.

228 For the same reason, the defendant's reference to the preliminary assessment by the Technical Board of Appeal of 8 March 2024 concerning the appeal against the EPO's opposition decision on the parallel patent EP 3 467 666 (Annex QE 4, para. 33 therein) is also of no further assistance. The Technical Board of Appeal does not even provide a reason as to why the implementation of a queue should have been obvious to a person skilled in the art on the basis of D 1.

e) Combination with D 11

229 D 11 is further removed from the teaching of the patent at issue than D 1 and D 10. A person skilled in the art would not have drawn upon it, starting from D 1, to solve the technical problem.

230 D 11 discloses a system and a method for managing data traffic over wired, wireless or hybrid networks at the protocol level. The system is designed to take into account the different requirements of various data types and their behaviour in different network types. It optimises how arbitrary IP packets from a mobile device are sent over different networks (prioritisation, jitter, roaming, policy).

231 D 11 does not relate to a method for the progressive playback of a media sequence, nor does it relate to any other method for streaming media content or even for the download or playback of media content in any other way. Although D 11 mentions streaming applications such as multimedia applications, video-on-demand or webcasting (p. 2, lines 15 et seq. of D 11), it does so only as an example of various applications on mobile devices that generate data traffic with different transmission and fault-tolerance requirements across different networks (p. 2, lines 22–26. of D 11). D 11 deals with a solution that takes into account the different requirements of various data types and their behaviour across different networks (p. 8, lines 15–18 of D 11). This has nothing to do with the progressive playback of a media sequence or, more generally, with a streaming method, which relate to the application layer rather than the protocol layer.

232 D 11 therefore relates to a different technical field from D 1 and addresses an entirely different problem. In so far as the defendants contend that D 11, like D 1, deals with the optimisation of limited communication resources, this is too general. Accordingly, a person skilled in the art, starting from D 1, would not have referred to D 11 in order to find a solution for handling multiple concurrent server requests. Insofar as the defendant further argues in its Reply to the counterclaim for nullity that the person skilled in the art would recognise that D 1 is particularly well suited as a supplement to D 2 because it is designed to handle different types of data and their transmission over various networks, this too does not address in detail the problem underlying the technical teaching of the patent at issue.

233 Irrespective of this, D 11 also does not disclose any index-based byte-range queries, so that a combination of D 1 with D 11 would not have achieved the desired result in any event, due to the lack of disclosure of feature b3. Furthermore, as the queue disclosed in D 11 is situated at a different level from the application level, it is not disclosed that the queue is emptied in response to a user instruction in accordance with feature c2. In this respect, too, the combination of D 1 and D 11 does not lead to the teaching of the patent at issue. Ultimately – as the Claimant has correctly argued – a combination of D 1 and D 11 leaves the essential content of D 11 unchanged, because D 11 relates solely to transmission at the network level and does not modify the application-related logic of D 1.

f) Combination with D 9

234 The situation with regard to D 9 is similar to that of D 11. It is further removed from the teaching of the patent at issue than D 1 and D 10. A person skilled in the art would not have drawn upon it, starting from D 1, to solve the technical problem.

235 D 9 relates to the server-side processing of media requests in a multimedia editing environment. This involves the editing of media material. For this purpose, D 9 uses the X or X Window System, also known as X11 or simply X. This is a windowing system that forms the basis for graphical user interfaces (GUIs) under UNIX, Linux and UNIX-like operating systems. The system is based on a client-server model, whereby the X server primarily manages the display, keyboard, mouse and other input/output devices, and is responsible for rendering graphical elements (windows, menus, buttons, etc.) on the screen and processing user input. Despite being called a ‘server’, the X server runs on the local machine. It receives drawing commands and input requests from X clients and executes them. For example, it renders windows and GUI elements in accordance with the clients’ instructions and sends user input events (such as keystrokes and mouse clicks) back to the respective clients. With the device according to D 9, a user can navigate through a multimedia interface, in particular along a ‘timeline’. To this end, the server receives ‘media access requests’ for specific media objects, such as images or short sequences, and manages a queue of these requests. The server prioritises, re-prioritises or cancels these requests, depending on whether an object is still visible or relevant, so that the graphical user interface remains responsive. Essentially, D9 relates to a method for server-side management of media object requests in a local studio environment, so that the graphical user interface (the ‘GUI’) remains fluid.

236 In this respect, D 9 addresses a different problem to that of the patent at issue and D 1. D 9 concerns the improvement of latency in a multimedia environment comprising networked or distributed media servers (see p. 16, lines 2–7 of D 9) – but not in this general sense, rather at the object level. It is not concerned with improving the progressive playback of a media sequence, in particular not with regard to the delay-free implementation of trick-play functions within the context of such playback,

but rather the smooth display of various multimedia objects in response to a large number of client-side requests to the server.

237 Furthermore, a combination of D 1 with D 9 would not lead to the teaching of the invention either. D 9 does not relate to a streaming method or a method for the progressive playback of a media sequence within the meaning of feature a of the patent at issue. Nor is a media file stored on a server with an index disclosed. Furthermore, D 9 does not disclose the identification of byte ranges, their placement in a queue, or the requesting of these byte ranges from the server in accordance with feature group b. D 9 relates to an entirely different level, namely the object level (an image, a sequence), but does not deal with the addressing of bytes within the file. Accordingly, in D 9, a queue is not managed on the client side, but by the server, which prioritises, reprioritises or cancels the object requests made by various clients. In this respect, there is also no disclosure of feature groups c and d (determination of byte ranges, placing byte ranges in the queue and requests for the byte ranges).

238 In so far as the defendants argue that, according to D 9, requests could be placed in a request queue and sent to the server, thereby implying that the queue is managed on the client side, this argument cannot be accepted. The passages cited by the defendants (p. 15, lines 27–37 of D 9) do not directly and unambiguously disclose that the client manages a queue. Rather, it follows from the description of D 9 that the queue is set up on the server side and that the client is able to cancel requests placed there and to adjust the queue as a whole (see p. 11, lines 36 et seq., p. 15, lines 2–7, and p. 16, line 1 et seq. of D 9).

239 Nor has it been argued, nor is it apparent, what motivation or indication the person skilled in the art would have had to refer to D 9 on the basis of D 1 and arrive at the solution according to the invention. In this regard, the defendants essentially refer to the preliminary opinion of the Technical Board of Appeal of 8 March 2024 in the opposition appeal proceedings concerning the parallel patent EP 3 467 666 (submitted as Annex QE 4) and to the examiner's remarks in the grant proceedings relating to the other parallel patent EP 3 411 341. However, these views are not binding on the Unified Patent Court. Nor do they provide any justification as to why a person skilled in the art would have any reason to combine D 9 with D 1 and implement a corresponding queue, which relates to an entirely different level from byte addressing and is in any case managed by the server. The EPO does not comment on the issue of byte ranges or the use of an index. Rather, in its reasoned opinion of 3 July 2026, issued in the context of the opposition proceedings concerning the patent at issue, the Opposition Division confirmed the view expressed here and held that D 9 did not disclose a client-side queue (section 12.16.4 of WKS 11).

4. D 2 with a person skilled in the art

240 Nor is the teaching of the patent at issue suggested on the basis of WO 03/046750 (Annex D 2) in combination with the skilled person's knowledge.

a)

241 D 2 deals with the streaming of content over the Internet using the Hypertext Transfer Protocol (HTTP). D 2 states that, whilst HTTP is used to stream content from the beginning to the end of the streaming object, this is done without the possibility of playback manipulation (p. 1, lines 8–10 of D 2). D 2 describes solutions whereby a content object file can be played back from any section of the file's content in response to playback manipulation by the user, whilst it is still being streamed from the server (p. 3, lines 25–30 of D 2).

242 The origin server hosts content objects at a location that is typically remote from the content processing programme. Software on the origin server generates web pages that are displayed to a user connected to the content processing programme. Links within the web pages are HTTP calls to content object files. As soon as a link is selected, an HTTP request is sent to the origin server to begin transferring the content object file to the content processing programme (p. 3, lines 11–16 of D 2). The content processing programme plays back the streamed content object file whilst it is being downloaded from the origin server. As a rule, the content object file is played back from the beginning once streaming has commenced (p. 3, lines 22–26 of D 2).

243 A flowchart illustrating a streaming method according to D 2 is shown in Figure 4. Starting with the HTTP request to the origin server, the content processing programme is connected to the server. It analyses the file to be downloaded, including the file length in bytes, based on an HTTP header sent prior to the HTTP transmission of the file. A file header provides further information (bit rate, codec, other format information) about the content (p. 5, lines 21–31 of D 2). Armed with the information about the content file, the location of the content within the file and the format of the information are determined (p. 5, lines 32–33 of D 2). The next step involves downloading and playing back the content until the download is complete or a playback control command from the user is detected (p. 6, lines 7–12 of D 2). In response to a playback control signal, the byte range within the content file can be interpolated on the basis of a time specified by the user or a percentage, which is then requested from the origin server via an HTTP byte request (p. 6, lines 13–22 of D 2).

b)

244 In any event, D 2 does not disclose features b3, b_new, b4, c2, c_new, c3 and feature group d. Whether it discloses an index can be left open.

aa)

245 D 2 does not disclose feature b3.

246 It follows from the wording of feature b3 and, indirectly, from the requirement for a queue as set out in feature b_neu, that more than one byte range is to be requested. The teaching of the patent at issue makes it possible to utilise the network more flexibly through a large number of requests for small byte ranges and also to enable more granular user instructions, whereby the size of the byte ranges is not specified.

247 D 2 does not directly and unambiguously disclose that more than one byte range is requested to commence streaming playback. On the basis of the header information, the application determines the location of the streaming content within the file and requests it (see p. 5, line 32 to p. 6, line 7 and Figure 4). From then on, the server transmits the content file continuously until another byte range is requested in response to a user command. Figure 4 also shows no further byte range requests (see also p. 3, lines 22–26 of D 2).

bb)

248 It is undisputed that D 2 also does not disclose a queue within the meaning of feature b_neu and, consequently, does not disclose the request for byte ranges from the queue in accordance with feature b4. The buffering of data in accordance with feature b4 and the reproduction of the contents in accordance with feature b5 are undisputedly described in D 2 (p. 7, lines 18–23 of D 2).

cc)

249 In any event, of the feature group c, D 3 does not disclose feature c3 in so far as more than one byte range – namely the range starting from the user control jump point – is to be requested. In this context, D 3 refers only to ‘byte-range’ in the singular as a range beginning within the file (cf. p. 6, lines 13–23 of D 2).

250 Notwithstanding this, it is undisputed that none of the queue-related features are disclosed.

dd)

251 Furthermore, there is no disclosure of feature group d. D 2 does not describe a mask within the meaning of the patent at issue.

252 The defendants are of the view that D 2 is based on the use of HTTP, such that the person skilled in the art would also consult the HTTP 1.1 specification (Annex D 8) valid on the priority date and make use of the cache disclosed therein, which corresponds to a mask within the meaning of the patent at issue. The court cannot agree with this view.

253 Even though D 2 deals with streaming via http, it provides for a content processing programme to control the download and playback of the content file (e.g. p. 3, lines 8 and 17; p. 5, lines 16 and 22; p. 6, lines 17 and 26 of D 2). There is no indication that D 2 makes use of the cache described in the HTTP 1.1 specification.

254 Even if the defendants refer in this respect to the buffer disclosed in D 2 (p. 7, lines 19–23 of D 3), this does not imply anything to the contrary. D 2 does not directly and unambiguously disclose that the buffer is the HTTP cache of Annex D 8. As the Opposition Division at the EPO also correctly notes in its reasoned opinion of 3 July 2026 (section 13.4 of Annex WKS 11), the buffer is neither disclosed in relation to HTTP communication, nor is the term ‘cache’ used as in D 8, nor does it refer to HTTP byte-range requests. There is simply no connection whatsoever to an HTTP cache.

255 Apart from that, a cache in the form of an HTTP cache does not constitute a mask within the meaning of the teaching of the patent at issue. In this regard, the defendants refer to ‘entity tags’ contained in the header field of every response message from the server that is stored in the cache. On the basis of these ‘entity tags’, the client can check whether certain data has already been downloaded. The court cannot agree with this view. This is because the mask is a data structure independent of the downloaded byte ranges, which enables the client to determine whether certain byte ranges have already been downloaded without having to search through the entire memory for all data. However, this is precisely the case with the HTTP cache. As the header information forms part of the response message, the client must check the entire memory and all response messages to determine whether the required byte range is already present.

c)

256 In light of all this, D 2 – regardless of the question of the index – appears to be further removed from the teaching of the patent at issue than D 1. The person skilled in the art has no reason to arrive at the teaching of the patent at issue on the basis of D 2.

aa)

257 It has not been argued, nor is it otherwise apparent, what reason the person skilled in the art would have to modify the streaming method of D 2 so as to request several consecutive byte ranges from the server via multiple range requests from the start of streaming. The defendants’ view that modifying D 2 so that several small byte ranges are requested from the server is an obvious design option lying within the immediate scope of the art cannot be accepted in such general terms. The defendants’ reference to the MPEG-4 Part 12 standard (submitted as Annex D 13) and the fact that this standard discloses a fragmented media file does not alter this conclusion. However, this precludes a server-controlled streaming method in which the server determines the data to be transmitted on the basis of the (individual)

byte range requested by the client, as in D 2. Apart from that, there is simply no indication as to why a person skilled in the art should modify the streaming method of D 2 in this respect.

bb)

258 Based on D 2, there is also no motivation for the person skilled in the art to provide a queue in accordance with the invention, as defined by features b_neu, c_neu and d_neu, for the streaming method. Precisely because the content file is continuously transmitted from the server until a new byte range is requested in response to a user command, it is not apparent that there could be multiple byte range requests at all that could be placed in a queue. Against this background, it is even less clear why the queue according to feature c2 should be emptied.

259 The defendant's argument that D 2 suggests the use of a browser and that the person skilled in the art would inevitably have encountered browser implementations featuring such request queues does not hold water. In accordance with the above considerations, it is not apparent that multiple parallel byte-range requests would occur. Irrespective of this, the reference in D 2 to the use of a browser is so general that it does not constitute a motivation to now also implement a queue. In so far as the defendants contend that a queue is appropriate even where only a single byte-range request is sent, because it might not be transmitted due to a lack of transmission capacity, this has nothing to do with the teaching of the patent at issue or the function of a request queue according to the invention.

cc)

260 No reason has been put forward, nor is it apparent, as to why the person skilled in the art should, on top of that, provide a mask in accordance with feature group d.

5. D 3 with specialist knowledge or D10

261 Finally, the teaching of the patent at issue is not suggested on the basis of the patent application US 2006/0102371 A1 (Annex D 3) – whether in combination with general technical knowledge or with D 10.

262 D 3 deals with the streaming of a file from a server to a client. D 3 expressly defines the term 'streaming' as the ability of an application to continuously play back a media stream, such as a video or audio stream, whilst the stream is being transmitted to the client via a network (paragraph [0002] of D 3). According to D 3, byte ranges are determined on the basis of metadata and requested from the server (paragraphs [0021] and [0023] of D 3). User input is possible, whereupon the client requests new byte ranges (paragraph [0010] of D 3).

263 It is undisputed that D 3 does not disclose a queue and therefore does not disclose the features of the patent claim relating to such a queue. Furthermore, D 3 does not disclose a mask and, consequently, does not disclose feature group d. Nor can anything to the contrary be inferred from the description of D 3, according to which, in certain embodiments, HTTP is used for the transmission of the streaming file (paragraph [0016] of D 3). In so far as the defendants contend that the person skilled in the art would therefore also consult D 8 and use the cache disclosed therein, which constitutes a mask, this argument cannot be accepted. Apart from the fact that – as explained in relation to D 2 – the cache cannot be understood as a mask, D 3 expressly states that the invention also enables the client to utilise the available memory efficiently, so that the retrieved media data does not have to be stored as a file. They can be used according to the ‘play and delete’ principle, i.e. the parts of the media data that have already been played do not need to be retained any longer (paragraph [0010] of D 3). However, this argues against the use of the cache disclosed in D 8 and also against the use of a mask, which is precisely intended to display the byte ranges still present on the client. In this respect, D 3 departs from the teaching of the patent at issue.

264 This assessment is consistent with the qualified observation made by the Opposition Division on 3 July 2026, according to which the person skilled in the art, prompted by the teaching of D 3 and paragraph [0010] therein, would have deactivated the HTTP cache (see section 14.4 of WKS 11).

265 Against this background, the person skilled in the art had no indication or motivation to take the next step towards the teaching of the patent at issue; regardless of whether this was in combination with general technical knowledge or D 10.

IV. Auxiliary claims

266 As the patent at issue is upheld as granted, no decision is required on the application for amendment of the patent, which relates solely to auxiliary claims. Nor is there any need to rule on the admissibility of the amended auxiliary claims submitted by document of 26 June 2026, as set out in Annex WKS HA 3. Precisely because the auxiliary claims are no longer relevant, the Court leaves open the decision on the admissibility of the further auxiliary claims.

D Action for infringement

267 The action for infringement is well founded.

268 The defendants are indirectly infringing claim 1 of the patent at issue within the meaning of Article 26(1) of the UPC Agreement.

I. Suitability for use in a process

269 The contested embodiment is objectively capable of realising all the features of the method protected by claim 1 of the patent at issue.

1. Browser version of the contested embodiment

270 The claimant has demonstrated, on the basis of the browser version of the contested Netflix software, that when the software is installed on a terminal device, the software enables that device to carry out the method according to claim 1 of the patent at issue, including all its features.

271 This is undisputed in respect of feature a and feature groups b and c, in so far as the request queue is not concerned. However, the contested software also uses a request queue in accordance with the patent, meaning that the relevant features are likewise realised. Furthermore, the contested embodiment is capable of realising feature group d.

a) Feature a

272 The end device on which the contested embodiment is installed constitutes the client, which is capable of playing back a media sequence stored in a media file on a remote server whilst it is still being loaded from the server (feature a). The media file also contains an index (feature a).

b) Feature group b

273 The contested embodiment is also capable of realising feature group b. This is undisputed between the parties, except in so far as it concerns the use of a request queue in features b_{new} and b₄. However, these features are also realised by a client equipped with the contested embodiment.

274 It is undisputed between the parties that the contested Netflix software maintains lists for byte range requests. It is also undisputed that the list referred to by the Claimant as 'sub-list 3' displays the byte ranges for which requests have been prepared but not yet sent to the server (so-called 'internal requests'), whilst sub-lists 2 and 1 indicate byte range requests sent to the server but not yet answered (sub-list 2) and byte range requests already answered by the server (sub-list 1), respectively.

275 The table below is taken from the statement of claim and illustrates, for the purposes of an example media sequence, the contents of the three sub-lists and the buffer, showing the byte ranges contained in each, together with the corresponding changes over a certain period of time.

Zwischenspeicher			Unterlisten			
Länge	Erstes Segment	Letztes Segment	Unterliste 1	Unterliste 2	Unterliste 3	Zeitbereich
0-4095						
4096-12646						
Sprung: von 0.000s nach 0.000s						
					24135-70388	0.000-3.666
					70389-159729	3.666-5.000
				24135-70388		
				70389-159729		
			24135-70388			
1		24135-70388			159730-161036	5.000-6.000
				159730-161036		
					161037-172677	6.000-13.291
1		70389-159729				
					161037-172677	
1		159730-161036				
					172678-267521	13.291-15.125
					267522-566534	15.125-16.833
					566535-730702	16.833-18.583
1		161037-172677				
				172678-267521		
				267522-566534		
				566535-730702		
			172678-267521			
1		172678-267521			730703-941927	18.583-20.500
				730703-941927		
				267522-566534		
					941928-1106552	20.500-21.958
1		267522-566534				
					1106553-1232896	21.958-23.666
2	267522-566534	566535-730702				
1		566535-730702				
				1106553-1232896		

276 It is not necessary to determine whether sub-list 3 itself can be regarded as a request queue. However, it is apparent from the table that the client may well have created several 'internal byte range requests' before they were sent to the server. Sub-list 3 contains three byte ranges in succession, without these byte ranges having been sent and the entries in sub-list 3 having been transferred to sub-list 2. Accordingly, the client certainly has three byte-range requests on hand at this point in time, which are subsequently sent in sequence (see Sub-list 2). Consequently, the client has a request queue because three byte-range requests were created and cached before being sent to the server in the order in which they were created.

277 It is undisputed that the table accurately reflects the actual circumstances when playing back a media sequence using the contested embodiment. In so far as the defendants argue that the claimant has not conclusively demonstrated the use of a queue by the contested embodiment, this does not constitute a material dispute. Nor, on a correct interpretation, is it relevant that the byte range requests were not necessarily placed in a fixed order in a queue from which they are sent, as might be the case from a FIFO buffer. It is sufficient that there are several byte-range requests, which are then transmitted in the specified order. This is evident from sub-lists 1 to 3.

- 278 The defendants have argued that the contested embodiment using the Cadmium Player does not maintain a queue as defined by the invention, because a ‘MediaRequest’ – i.e. a byte range request – is passed to the browser via an interface as soon as it is created. However, this does not follow from the teaching of the patent at issue. The client is constituted by the end device – in this case, a computer with a browser – and the contested Netflix software installed thereon. For the purposes of implementing the teaching of the patent at issue, it is irrelevant whether the contested software or the end device, together with any software installed thereon, maintains a queue in accordance with the invention. The contested embodiment is capable of carrying out the method protected by claim 1 of the patent at issue even if the queue is formed by the end device or the browser installed on it.
- 279 In so far as the defendants have stated that they are unaware of how the respective browser specifically communicates with the server, and that they cannot influence it, this argument falls short. This submission does not constitute a substantial challenge and leaves unaffected the suitability of the contested embodiment to apply the method of the invention, where applicable in conjunction with other parts of the client.
- 280 In fact, the contested software does have some influence on the queue, even if it is maintained by the browser. This becomes apparent in relation to the clearing of the request queue. Namely, if a user instruction is issued stating that the new playback position lies outside the area already downloaded, the request queue is emptied; that is to say, the byte range requests that have been created – which, according to the defendant’s submission, have been passed to the browser – and have not yet been sent are no longer sent. This is evident from the table below, which also originates from the statement of claim and which indisputably reflects the actual circumstances regarding the byte-range requests created, sent and/or already received over a certain period of time for the playback of a media sequence in the event of a user instruction:

Unterlisten		
Unterliste 1	Unterliste 2	Unterliste 3
	125643118-125939519	125643118-125939519
		125939520-126338611
125323468-125643117		126338612-126705232
Zeitbereich Puffer: 1359.709s-1376.426s		
Sprung: von 1362.893s nach 1450.124s		
		126705233-127155573
		127155574-127636815
	126705233-127155573	
	127155574-127636815	

- 281 Accordingly, as shown in sub-list 3, two byte range requests were generated immediately prior to the user input; these had not yet been sent to the server and were therefore in a queue. These byte range requests were no longer sent even after the

user input; they no longer appear in sub-list 2. Consequently, the contested embodiment must have caused the queue to be emptied. This is because, following the user input, two new byte-range requests were generated, which were also in the queue (sub-list 3), before they were then sent to the server (sub-list 2).

282 In fact, byte-range requests are also sent to the server in accordance with feature b4. The defendants have argued that the streams are divided into smaller units ('movie fragments') within the files, specifically into time ranges rather than byte ranges, due to bitrate-adaptive streaming. Depending on the bitrate, the fragments contained a varying number of bytes and could be requested by the contested embodiment via the browser from the server by means of a 'MediaRequest' and then downloaded. In so far as this is intended as an objection that no byte ranges were requested, this argument does not hold water. The claimant has undisputedly argued that the requests to the server consist of URLs with the structure *https://ipv4-*server*-ix.1.oa.nflxvideo.net/range/*start byte*-*end byte*?o=[...]1*&sc=[...]2**, whereby the values 'start byte' and 'end byte' specify precisely the byte range. It is therefore beyond doubt that the 'MediaRequests' are undoubtedly byte-range requests within the meaning of the patent at issue.

c) Feature group c

283 The contested embodiment is also capable of realising feature group c. This is undisputed, insofar as no request queue is involved.

284 With regard to feature group b, it has already been shown that the contested embodiment is also capable of establishing a request queue, at least in conjunction with other components of the client.

285 Furthermore, the request queue is also cleared in accordance with feature c2. This is always the case whenever a user instruction results in the media sequence being played from a position outside the section of the media sequence that has already been downloaded. This has also already been mentioned in connection with feature group b and is evident from the table below:

Unterlisten		
Unterliste 1	Unterliste 2	Unterliste 3
	125643118-125939519	125643118-125939519
		125939520-126338611
125323468-125643117		126338612-126705232
Zeitbereich Puffer: 1359.709s-1376.426s		
Sprung: von 1362.893s nach 1450.124s		
		126705233-127155573
		127155574-127636815
	126705233-127155573	
	127155574-127636815	

286 Since sub-list 3 reflects the queue and, following the user input, the two byte-range requests created immediately beforehand are neither present in sub-list 3 nor do they appear in sub-list 2—and were therefore no longer sent to the server—the request queue was cleared as a result of the user instruction. The fact that the queue is not cleared with every user instruction is irrelevant if the patent at issue is interpreted correctly. Thus, it does not depart from the teaching of the patent at issue if the request queue is not cleared when the new playback position lies within the downloaded section of the media sequence. The patent claim does not preclude the emptying of the queue from being dependent on further conditions (in this case: a jump within or outside the downloaded section).

287 Furthermore, the feature c_neu is realised because – as can be seen from the table based on sub-list 3 – the request queue is re-established with other byte ranges required for playback from the new playback position.

d) Feature group d

288 The contested embodiment is also capable of fulfilling feature group d. In particular, the contested embodiment maintains a mask within the meaning of features d1 and d2 and, using this mask in accordance with feature d2, determines whether byte ranges required for playing back the media in accordance with the user's instruction have already been downloaded. Consequently, in accordance with feature d_new, only those parts of byte ranges that have not already been downloaded from the server are placed in the request queue.

aa) Feature d1

289 The contested embodiment maintains, amongst other things, the data structures 'GA' and 'Qn'. Together, these two data structures form a mask within the meaning of feature d1. This is because the data structures 'GA' and 'Qn' indicate which video and audio segments are located in the buffer memory (GA) and in the temporary storage (Qn) of the device equipped with the contested software, but do not themselves contain the video segments downloaded from the server. In addition to information on the start and end times and the start and end bytes, they contain details of the storage location of the existing video segments. This has been demonstrated by the Claimant through its investigations and is undisputed between the parties.

290 The objection that the contested embodiment does not use a mask within the meaning of the patent at issue, according to which each bit corresponds to a block of a specific length to be downloaded, does not hold water if the patent at issue is interpreted correctly. A mask according to the invention does not necessarily have to be a bitmap. Any index or directory that enables the client to check whether at least one (part of a) byte range has already been downloaded, without having to check the memory and the downloaded byte ranges directly, is sufficient. The data structures 'GA' and 'Qn' meet these requirements.

291 Nor does it follow from the teaching of the patent at issue that the data structures 'GA' and 'Qn' do not yet display, in some cases, byte ranges which, according to Sub-list 1, have already been received from the server, because these byte ranges have not yet been transferred to the buffer. In this respect, the claimant has plausibly demonstrated that – starting with the receipt of a byte range from the server, through its transfer to the application and storage in the buffer, right up to its recording in the form – this constitutes a multi-step processing procedure which may result in the client having already received byte ranges from the server, but these not yet being recorded by the interface. This temporary lack of clarity, attributable to the multi-step processing procedure, is accepted by the patent at issue, as is also evident from paragraph [0049] and Figure 7 of the patent at issue. Despite the multi-step nature of the process, the sequence from the initial receipt of a byte range through to its storage in the buffer and its recording in the mask constitutes a single technical process that cannot be artificially split up. Nor do the defendants argue that other intermediate steps are involved in this process which would justify not regarding the mask as a complete reproduction of the memory contents.

bb) Feature d2

292 The contested embodiment is capable of fulfilling feature d2.

(1)

293 In the event of a user command involving a new playback position occurring after the previous playback position (forward skip), the contested embodiment uses the 'GA' and 'Qn' data structures to determine whether parts of the byte ranges required to play back the media sequence in accordance with the user command are already present in memory. To this end, the Cadmium Player uses the two data structures to determine the start time of the first media segment and the end time of the last media segment, both in the buffer memory and in the temporary memory, and combines these two time ranges to form the start and end times of the total downloaded range. The embodiment in question then checks whether the new playback time specified by the user's instruction lies before the start time or after the end time of the media segments present in the buffer memory and the temporary memory. If the new playback position lies outside the determined time range, the byte ranges present in the buffer and the temporary storage are discarded. If the new playback position lies within the determined time range, the byte ranges in the buffer and the temporary storage that precede the new playback position are discarded, whilst the remainder are retained. The respective status of the buffer and the cache is reflected in the data structures 'GA' and 'Qn'. This sequence of events is undisputed between the parties.

(2)

- 294 The sequence described above fulfils feature d2. It is undisputed that, in the event of a forward skip, the contested software checks whether the new playback position lies within or outside the time range already downloaded. Notwithstanding the fact that the check only results in the queue being cleared in the latter case, it constitutes a check as to whether byte ranges required for playing the media sequence in accordance with the user's instructions have already been downloaded, meaning that feature d2 is fulfilled. This follows from the subsequent procedure that follows on from this check.
- 295 Firstly – as explained in the context of the interpretation – it should be noted that the technical teaching of the patent at issue does not prescribe a fixed sequence for feature d2 in relation to feature c2 or, for that matter, in relation to feature c1. It is therefore possible that the procedural step according to feature d2 takes place before the request queue is emptied (feature c2) and even before the byte ranges required for the playback of the media sequence in accordance with the user's instructions are determined (feature c1).
- 296 Furthermore – as also explained in the context of the interpretation – it should be noted that the technical teaching of the patent at issue does not prescribe how the method step according to feature d2 is to be technically implemented. It is sufficient if, at the end of the check, it is determined whether a byte range or part of a byte range required for playback has already been downloaded. A byte-by-byte (or byte-range-by-byte-range) comparison is not strictly necessary for this.
- 297 In the present case, the contested embodiment takes advantage of the fact that, in the event of a user command in the form of a forward jump – regardless of whether it is a 'skip' or 'seek' operation – all byte ranges from the new playback position onwards are required for playback. Furthermore, the contested embodiment takes advantage of the fact that, in the time interval following the downloaded section present in the buffer and cache, there are no further downloaded sections. In this respect, it has not been argued or is not apparent that there may be gaps in the downloaded section in the streaming method applied by the contested embodiment. In any event, there are undoubtedly use cases in which the byte segments already downloaded are limited to a self-contained sequence of byte segments stored in the cache and buffer around the current playback position, as is also indicated by the tabular representations of the cache and buffer statuses according to the claimant's investigations (see paragraphs 169, 179 and 183 of the statement of claim).
- 298 If the contested embodiment now checks whether the new playback position, determined by the user's input, lies within or outside the downloaded range, it is established at the end of this check whether at least part of a byte range required for the playback of the media sequence from the new playback position has already been downloaded or not. If the new playback position lies outside the downloaded

range (second scenario), no such byte range has yet been downloaded. Consequently, all byte ranges from the new playback position onwards are placed in the new request queue. If, on the other hand, the new playback position lies within the downloaded range (first scenario), it is certain that the required byte ranges are already available. The client now behaves differently to the second scenario. It does not request the byte ranges from the new playback position onwards, but only those that follow on from the already downloaded range. Whether and to what extent further verification steps are required for this is irrelevant. Feature d2 merely requires determining whether the required byte ranges have already been downloaded. Such a check within the meaning of feature d2 takes place because, otherwise, the contested embodiment would be unable to distinguish between the two scenarios. The check as to whether the new playback position lies within or outside the downloaded range must therefore be classified as a method step within the meaning of feature d2.

(3)

299 It is irrelevant to the implementation of the technical teaching of the patent at issue if the check as to whether the new playback position lies within or outside the downloaded range simultaneously triggers the clearing of the request queue. The sequence of procedural steps according to features c2 and d2 is not fixed, provided the interpretation is correct. Furthermore, it is neither excluded that the clearing of the request queue depends on further conditions, nor that the determination step according to feature d2 is a condition for further procedural steps. The asserted patent claim does not preclude any of this. Consequently, it is also inconsequential if the extent to which the contents of the cache and buffer are discarded also depends on the check as to whether the new playback position lies within or outside the downloaded range. Since, in all cases, only byte ranges preceding the new playback position in time are discarded, the method steps of feature group d are in any event not affected by the forward jump, which is the only one relevant here.

(4)

300 Furthermore, it cannot be successfully argued against the implementation of feature d2 that the determination of the parts of the media file that have already been downloaded is not linked to byte ranges but to time ranges of the file, as is also evident from the Claimant's calculations; in fact, time is the only relevant criterion, because the contested embodiment employs a bitrate-adaptive streaming method in which the number of bytes per unit of time varies depending on the bitrate. In fact, however, the claim merely requires that the client determines, 'using a mask', whether at least part of a byte range has already been downloaded. The use of the mask does not preclude the client from relying on time intervals to determine which parts of the media file have already been downloaded. The technical implementation of the method step according to feature d2 is left to the skill and discretion of the person skilled in the art. In this respect, it even seems sensible, from a programming perspective,

to rely on time intervals and simply use the start and end times of the first and last bytes in the cache and in the buffer to determine the position of the new playback position in relation to the downloaded section, rather than carrying out a byte-by-byte comparison. Provided that it is ultimately established whether at least one (part of a) byte range required has already been downloaded, feature d2 is in any event satisfied. This is, however, the case here, particularly as the contested embodiment specifies the required byte ranges in detail in the 'MediaRequests' subsequently placed in the queue.

(5)

301 Furthermore, the objection that the contested embodiment does not divide byte ranges that have already been requested into parts of byte ranges does not hold water. The defendants have argued in this regard that the byte ranges specified in a 'MediaRequest' can only be requested and downloaded from the server in their entirety. It is not possible, they claim, to request and download only a part of these 'MediaRequests'. Furthermore, the data structures 'GA' and 'Qn' always refer only to entire 'MediaRequests' as fixed units. Consequently, it is not possible to identify and place in the queue the parts of byte ranges that are required. However, if the patent at issue is interpreted correctly, this does not preclude the fulfilment of feature d2 and, consequently, also of feature d_{neu} (see below). The patent at issue does not make a clear distinction between byte ranges, parts of byte ranges or blocks, with the result that parts of byte ranges in turn constitute byte ranges. It is sufficient, provided it is established at all whether a (part of a) byte range has already been downloaded. This is the case with the contested embodiment: by checking whether the new playback position lies within or outside the byte range present in the cache and in the buffer, it is established whether a byte range is present (first scenario) or not (second scenario).

cc) Feature d_{new}

302 In accordance with feature d_{new}, only those parts of byte ranges that are required to play the media in accordance with the user's instructions and have not already been downloaded from the server are then placed in the request queue.

(1)

303 From the table previously displayed in relation to the attributes b_{neu} and c2, it follows that, in the event of a forward jump to a range outside the downloaded range, only the byte ranges required from the new playback position at time 1,450.124 s – that is, the byte ranges from range 126,705.233 to 127,155,573 – have been added to the receipt queue.

Unterlisten		
Unterliste 1	Unterliste 2	Unterliste 3
	125643118-125939519	125643118-125939519
		125939520-126338611
125323468-125643117		126338612-126705232
Zeitbereich Puffer: 1359.709s-1376.426s		
Sprung: von 1362.893s nach 1450.124s		
		126705233-127155573
		127155574-127636815
	126705233-127155573	
	127155574-127636815	

304 No byte ranges that are already present in the buffer or cache are placed in the new request queue. Due to the jump outside the downloaded range, the cache and buffer are emptied anyway. As there are no subsequent byte ranges already present in the client, all the byte ranges that are required can also be placed in the new request queue.

(2)

305 The defendants, however, object that feature group d is not fulfilled because, in the case of a 'skip' operation (a forward jump within the downloaded range), the request queue (sub-list 3) is not completely emptied. They argue that this is only the case with a 'seek' operation (a forward jump outside the downloaded range). However, emptying the request queue is a necessary prerequisite for setting up the new request queue, which must then be filled in accordance with feature group d. For all outcomes of the determination in accordance with feature d2 – the required byte ranges are present, or they are not present, or they are partly present and partly not present – a new queue must be available, meaning that the previous queue must have been emptied. This is not the case in the contested embodiment.

306 This objection does not hold water, as it assumes that the request queue must always be emptied upon a user instruction and that the procedural steps of feature group d subsequently set out requirements for filling the new request queue. This incorrect understanding is made particularly clear by the fact that, for all possible scenarios within feature group d – viewed retrospectively, as it were – the request queue would have had to be emptied beforehand. This cannot be accepted under a correct interpretation.

307 The teaching of the patent at issue does not preclude the emptying of the request queue from depending on further conditions. The queue does not always have to be emptied, without exception, as a result of a user instruction. Furthermore, there is no fixed sequence between the emptying of the request queue in accordance with feature c2 and the procedural steps of features c1 and d2. It cannot be ruled out that the client – as in the contested embodiment – first determines whether

at least part of a byte range required for playback has already been downloaded (feature d2) and then clears the queue (feature c1).

308 Above all, however, it cannot be inferred from feature group d that the request queue must be emptied for all possible scenarios – no required byte range has already been downloaded, all byte ranges have already been downloaded, and required byte ranges are partly downloaded and partly not downloaded – or that it must be possible in all three scenarios to populate a new queue. Both functionalities – emptying the request queue and determining whether required byte ranges have already been downloaded – are independent of one another and offer different advantages. In the description of the patent at issue, too, they are presented independently of one another and are not linked (cf. paragraph [0043] on the one hand and [0047] on the other). Provided that the method steps of feature group d are carried out, this is sufficient for the application of the protected method, irrespective of the circumstances under which the features are actually implemented and the results to which the individual method steps lead.

309 In the case of the contested embodiment, the process step according to feature d2 consists – as shown – of checking whether, in the event of a forward jump, the new playback position lies within or outside the downloaded range present in the cache and in the buffer. At least in the second scenario (a jump outside the downloaded range), the request queue is also cleared in accordance with feature c2. Subsequently, in accordance with feature d_{new}, only those byte ranges that have not already been downloaded from the server are placed into the new request queue. These are necessarily the byte ranges required for the playback of the media sequence in accordance with the user's instructions, which the client must have previously determined in accordance with feature c1. It has not been argued, nor is it otherwise apparent, that in the case of a forward jump there are instances in which byte ranges that are already present in the client are placed in the queue and requested.

310 The fact that none of the byte ranges required in accordance with feature c1 has not already been downloaded from the server, and that, in the event of the request queue being emptied, there cannot be any byte ranges that have already been downloaded and no longer need to be requested, does not alter the fulfilment of features d2 and d_{neu}. The client can only place all the byte ranges required in accordance with feature c1 into the new queue because it has previously determined that the new playback position lies outside the downloaded range and that no part of a required byte range has already been downloaded. Otherwise, it would only have placed those byte ranges in the request queue that adjoin the already downloaded range, as is also evident from the statement of claim in the event that the playback position lies within the downloaded range (see paragraph 179 of the statement of claim).

The fact that, in such a case – where the new playback position lies within the downloaded range – the queue is not emptied does not alter the fact that features d2 and d_neu are realised, at least in the event that the new playback position lies outside the downloaded range.

(3)

311 In so far as the defendants argued at the oral hearing that, based on such an interpretation of the features, the contested embodiment does not make use of a mask within the meaning of the patent at issue because its granularity – that is, the ratio of individually displayed byte ranges to the entire media file – is not utilised, this argument does not hold water. Claim 1 of the patent at issue, as asserted here, contains no further specifications regarding the mask to be maintained by the client beyond features d1 and d2. Above all, the granularity of the mask and the associated relationship between the mask's size and download efficiency are merely part of an exemplary embodiment (see paragraphs [0040] and [0042]), to which the broader teaching of the patent at issue cannot be restricted. It is therefore sufficient, as already explained, that – for the purpose of determining whether the required byte ranges have already been downloaded – it is sufficient to consider only the first and last bytes, or their start and end times, in the mask; and, in the event that the new playback position lies outside this downloaded range, all byte ranges from this playback position onwards are placed in the request queue.

(4)

312 The defendants argue that, in various scenarios, byte ranges are requested again even though they have already been downloaded and are available. Ultimately, however, this too does not depart from the teaching of the patent at issue.

313 The Claimant itself describes that, in response to a user instruction, the contested embodiment compares the existing time ranges of the video and audio tracks and the client retains, from the required byte ranges, only those that lie within the overlapping range, whilst discarding those that are present for only one of the two tracks. Such a situation may arise, for example, if the two tracks have progressed at different speeds during the download. This is, however, inconsequential, as there are also situations in which the existing time ranges – and consequently the available byte ranges – are identical. In such a case, no byte ranges are discarded and subsequently requested and downloaded again.

314 It is also inconsequential for the realisation of the teaching of the patent at issue that the contested embodiment is not, in principle, designed to download the entire streaming file and make it fully available to the client, but rather discards older byte ranges that have already been played at a specific point in time. If the user jumps back to a playback position for which no byte ranges are left in the buffer memory or the cache, these byte ranges must

be requested from the server and downloaded again. However, this does not affect the realisation of feature group d, in particular feature d_{neu}. When feature d1 (and similarly feature d2) states that the mask displays parts of the media file that have been downloaded, this does not mean all parts of the media file that have ever been downloaded, but only those that are actually still available to the client ('have been downloaded'). This is because the aim is to avoid parts that are already present being requested from the server and downloaded again. However, this does not preclude the client from discarding byte ranges for the efficient use of storage space or for other reasons, for example because they have already been played and are no longer required, or because a complete download of the media file is not desired.

315 Consequently, it does not fall outside the scope of the patent at issue if, as a result of a user instruction, the new playback position lies before the time range for which byte ranges are present in the buffer and the cache (jump back), with the result that the contested embodiment discards the byte ranges still present in the buffer and cache and, when the playback position approaches these time ranges again, then makes a new request. The teaching of the patent at issue, and in particular feature group d, does not preclude the client from discarding byte ranges that have already been stored on the basis of other conditions, even if they lie chronologically after the new playback position. Notwithstanding this, this scenario relates solely to the jump back. However, the contested embodiment already fulfils all the features of the patent claim when the user instruction leads to a new playback position that, chronologically, lies after the previous playback position (forward jump) and outside the downloaded section.

dd) Feature d3

316 The byte ranges placed in the queue are then requested from the server in accordance with feature d3.

2. Other versions of the contested embodiment

317 The above considerations regarding the suitability of the contested embodiment apply not only to the web browser version of the Netflix software, but to all variants, irrespective of the platform used (streaming players, games consoles, set-top boxes, Blu-ray players, smartphones and tablets, as well as computers and laptops).

318 The claimant has argued that it examined the suitability of the contested embodiment for implementing the patented method on the basis of the web browser version of the Netflix software. In this regard, it has set out, for all features of the patent claim, how these are realised by the contested software. Furthermore, the claimant stated that the software versions of the Netflix software intended for different platforms are identical in terms of the functionalities relevant to the patent infringement. Consequently, it has been argued for each feature of the patent claim how it is realised by the respective software variant.

319 Contrary to the defendants' view, this is sufficient to constitute a conclusive case of patent infringement by the Netflix software across all platforms. The defendants have not substantially contested this case. They merely argue that the claimant has drawn the wrong conclusions from an alleged streaming concept and that, in the absence of a specific submission by the claimant, there is no admissible case. This argument does not hold water. It is irrelevant on the basis of which conclusions the Claimant has arrived at its submission that the software variants of the contested embodiment, as determined by the various platforms, are identical in the functionalities relevant to the patent infringement. What is decisive is that the claimant has argued that, in the relevant functionalities – that is to say, in the technical details relevant to each feature, as set out for the browser version – all Netflix software variants are identical. In this respect, it would have been incumbent on the defendant to comment on any differences in the software variants. As it has failed to do so, the claimant's submission is undisputed.

II. Essential element of the invention

320 In light of the above, the contested embodiment is clearly a means relating to an essential element of the invention. This is because the contested software, in conjunction with a suitable terminal device, is capable of implementing the method according to the invention. The fact that the contested software is not a physical object does not preclude it from being a means within the meaning of Article 26(1) of the UPC Agreement.

III. Infringement and dual domestic connection

321 It is undisputed between the parties that the defendants, without the Claimant's consent, offered and supplied the contested software to other persons within the territory of the Member States of the UPC Agreement in accordance with Article 26(1) of the UPC Agreement, so that they are also able to apply the method of the invention in precisely that territory.

IV. Subjective requirements

322 Finally, the subjective requirements for indirect patent infringement under Article 26(1) of the UPC Agreement are also met. The defendants must in any event have known that the contested embodiment is suitable for the application of the method protected by the patent at issue and is also intended by the purchasers to be used in accordance with the invention. This is because the contested embodiment serves precisely to stream video files from a remote server, whereby, in the event of corresponding user interactions – such as skipping forwards to a section of the video that has not yet been downloaded – the teaching of the patent at issue is inevitably put into practice. Nor do the defendants claim that the software can be used without infringing the patent.

V. Legal consequences

323 The established patent infringement justifies the legal consequences set out below.

1.

324 Taking into account the circumstances of the case, the defendants are to be prohibited, pursuant to Article 26 of the UPC Agreement in conjunction

Article 63(1) of the UPC Agreement, the defendants must be prohibited from continuing to infringe claim 1 of the patent at issue (claim I.1). In the present case, an unrestricted injunction is appropriate because the possibility of using the subject-matter of the patent at issue without infringing the patent has neither been raised nor is it apparent. When using the contested embodiment, following the relevant user instructions ('Seek' operation) inevitably results in the application of the protected method, which justifies the granting of an unrestricted injunction. Warnings to users of the contested software do not constitute a suitable means of putting a lasting stop to the patent infringement by less onerous means. This applies all the more to the provision of undertakings to cease and desist, which, given the private nature of software use, cannot be successfully enforced in any event.

2.

325 The defendants are furthermore obliged to provide the claimant with information and to render an account (claims I. 2. and 3.).

a)

326 The obligation to provide information arises from Article 67(1) of the UPC Agreement. The information is necessary to clarify the origin and distribution channels of the software in question, as well as to calculate and assess the appropriate method by which damages may reasonably be claimed. In this context, the claimant may also demand the production of supporting documents, namely invoices or, if these are not available, alternatively delivery notes. The claimant has a legitimate interest in being able to verify the accuracy of the information by means of random checks (Düsseldorf local division, decision of 3 July 2024, UPC_CFI_7/2023; decision of 14 January 2025, UPC_CFI_16/2024; Mannheim local division, decision of 22 November 2024, UPC_CFI_210/2023; Munich local division, decision of 22 August 2025, UPC_CFI_248/2024).

327 Article 67(1) of the UPC Agreement provides a sufficient legal basis for all the information sought by the Claimant in application I.2. This also applies to the information requested under points I.2(a)(i) and (ii) of the applications, which are covered by Article 67(1)(c), first alternative, of the UPC Agreement. The information relates to the identity of all third parties involved in the manufacture or distribution of the infringing products. There is no reason to assume that means within the meaning of Article 26 of the UPC Agreement cannot be regarded as 'infringing products' within the meaning of Article 67 of the UPC Agreement (see also, in substance, the Munich local division, decision of 22 August 2025, UPC_CFI_248/2024). The elements of the offence under Article 26 of the UPC Agreement constitute an (indirect) patent infringement, which justifies treating the means used for this purpose

to be regarded as infringing products. Otherwise, unintended gaps in legal protection would arise under the Enforcement Directive 2004/48/EC, because it would be impossible or extremely difficult for the patent proprietor to establish a subsequent patent infringement in the distribution chain or to calculate the amount of their claim for damages against the indirect infringer. The patent holder cannot be referred to Article 67(1)

(c), second alternative, of the UPC Agreement, as it relates solely to the direct infringement of a process patent.

328 Nor should the information be limited to manufacturers, suppliers and other previous owners of the product who have themselves already determined the use of the supplied product in a manner that infringes the patent. Article 67(1) of the UPC Agreement does not contain such a restriction and is based on a misunderstanding of Article 26(1) of the UPC Agreement. This provision merely requires, as a subjective condition on the part of the infringer, that the infringer knows or ought to have known that the product is intended to be used for the purpose of utilising the invention (so-called 'intended use'). It is not necessary to prove that the intended use objectively exists on the part of a purchaser, and such proof is generally difficult to provide, particularly as the mere offering of a means pursuant to Article 26(1) of the UPC Agreement may already constitute a patent infringement. Furthermore, Article 26(1) of the UPC Agreement does not specify at which stage of distribution the use of the supplied or offered means in accordance with the patent might take place. In view of all this, no more restrictive conditions may apply to the provision of information under Article 67(1) of the UPC Agreement.

329 For the reasons set out above, the claimant may also demand the information set out in point I. 2. b) of the claims. This application is sufficiently specific. It is worded in such a way as to cover all forms of disclosure of the contested software to third parties via the internet – whether through a download initiated by the user ('pull' – downloaded quantities) or through a download initiated by the defendants ('push' – quantities obtained by accessing a website) – or by means of pre-installation on the end device. Any lack of precision in the wording of the application ('volumes ordered by accessing a website') does not render the application indefinite.

330 The claim under I. 2. c) is too broad insofar as it is not restricted to persons acting in a commercial capacity. Although the application repeats the wording of the Act in accordance with Article 67(1)(c) of the UPC Agreement, this provision expressly refers to the patent-infringing application of the protected process and can therefore only mean commercial application, as use in the private sphere for non-commercial purposes is exempt from patent protection under Article 27(a) of the UPC Agreement. The same conclusion follows from the interpretation of Article 67(1)(c) of the UPC Agreement, taking into account Article 8 of Directive 2004/48/EC of 29 April 2004. Furthermore, the claimant obtains information on the extent of private use via the application under I. 3. a), subject to appropriate measures to protect confidentiality (auditor's reservation). Contrary to the defendant's view, however, a request for information under point I. 2. c) does not require the identification of every single one of its employees, as they undoubtedly acted on behalf of the defendant

. In this respect, information is to be provided only regarding the legal entities on whose behalf the natural persons acted.

331 Confidentiality measures or confidentiality obligations cannot be ordered in respect of the information to be disclosed. Whilst it cannot be ruled out that the information requested in the application under I. 2. constitutes trade secrets or, in any event, otherwise confidential information, The claimant, to whom confidential information is disclosed pursuant to a court order for disclosure under Article 67 of the UPC Agreement and Rule 191 of the RoP, is also not implicitly subject to restrictions on the use of such information. Rather, a corresponding application by the opposing party is required under Rule 262A of the RoP (Court of Appeal, order of 29 January 2026, UPC_CoA_930/2025). No such application has been made in this case. The defendant's mere reference to the fact that the information to be disclosed constitutes trade secrets is not sufficient for this purpose. Confidentiality obligations cannot simply be ordered by the court on this basis, because the intended scope of these obligations is entirely unclear in both substantive and personal terms. Since, pursuant to Article 67 of the UPC Agreement, the information to be disclosed is also intended to include details of the distribution channels and third parties involved in manufacture and distribution, it is clearly intended to uncover the entire distribution chain and to enable the patent holder to bring claims against other persons involved in the patent infringement (see also Recital 21 and Article 8(1) of Directive 2004/48/EC of 29 April 2004). Accordingly, the use of the information to be disclosed cannot, in any event, be restricted to these proceedings or to the assertion of claims against the defendants. However, all of this would need to be clarified and discussed in an application pursuant to Rule 262A of the RoP, which is lacking here.

b)

332 The defendants' obligation to provide information arises from Article 68(3)(a), (b) of the UPC Agreement in conjunction with Rule 191, sentence 1, alternative 2 of the RoP. Accordingly, the defendants are required, even at the infringement proceedings stage, to provide the information the Claimant needs in order to verify the accuracy of the details and to obtain a basis for its calculation of damages. This also includes the submission of supporting documents.

333 Contrary to the defendant's view, the claim set out in I. 3. is not vague. In so far as the defendant objects that, as with the application in I. 2., the distinction between 'downloads' and 'page views', as well as the phrase 'broken down by download volumes and number of page views', is unclear, reference is made to the comments on application I. 2: 'Downloads' refer to instances in which the user has actively downloaded the contested embodiment, whilst 'page views' refer to instances in which the contested embodiment was installed upon visiting the website without any further action on the part of the user.

334 Nor is the requested reporting disproportionate. The information to be reported relates to the act of infringement, namely the

offering and supplying of the software in question. In the present case, the supply took place via 'downloads' and 'website visits'. On this basis, it does not appear to be ruled out from the outset that these facts may also be included in any calculation of damages. The claimant does not yet need to decide at this stage how any damages are to be calculated in detail. The fact that the defendants may also have at their disposal the media on which the contested embodiment can be reproduced, and therefore even have an overview of the extent to which the protected process is being used, does not render the accounting required here disproportionate. As a general rule, the indirect infringer is not aware of the extent of any subsequent direct infringement; consequently, the disclosure of accounts usually – and, in the present case, likewise – relates only to the extent of the supply of the means within the meaning of Article 26 of the UPC Agreement.

335 In so far as the defendants contend that the information to be disclosed constitutes trade secrets, such that an order should be made requiring it to be disclosed only to specific persons subject to a duty of confidentiality, no confidentiality order was to be made. For the reasons, reference is made to the comments on claim I.2. Furthermore, the Claimant has conceded to an auditor's reservation. This allows for an appropriate balance between the injured party's interest in accurate information and the infringer's legitimate interests in confidentiality. As the auditor may only act to the extent specified in the decision and is also bound by a duty of confidentiality towards the injured party, the Claimant may also select the auditor (Mannheim local division UPC_CFI_210/2023, decision of 22 November 2024; Düsseldorf local division, UPC_CFI_16/2024, decision of 14 January 2025).

c)

336 The determination that the claim for damages is well-founded is based on Article 26 in conjunction with Article 68(1) of the UPC Agreement (claim II.). Had the defendants exercised due care, they would have realised that their actions constituted an indirect patent infringement.

d)

337 The threats of penalty payments for breaches of the injunction and the obligations to provide information and account are based on Article 63(2) and Article 82(4) of the UPC Agreement in conjunction with Rule 354.4 of the RoP.

338 Pursuant to Rule 354.3 of the Rules of Procedure (RoP), an order or decision may provide for repeated penalty payments payable to the court in the event that a party fails to comply with the provisions of the order or a previous order, whereby the amount of such payments is to be determined by the court in light of the significance of the order in question. According to the case law of the Court of Appeal, the amount to be paid

be sufficiently deterrent to have a coercive effect, but must also remain within reasonable limits so that it constitutes an appropriate (proportionate) sanction. The threat of a penalty payment must also specify the conditions under which a particular amount of penalty payment is forfeited. This may, for example, be a lump sum or (preferably) a penalty for breaches per specified period, per item, for each infringement or the like. Where appropriate, the penalty notice may also specify a maximum amount of penalties that may be forfeited per order or in total. However, this does not prevent the court from increasing this maximum amount in a subsequent order – for example, in enforcement proceedings – for future further breaches, if the circumstances of the case so require (see Rule 354.3 of the RoP). For reasons of legal certainty for the defendant, the order or the decision on the merits should generally also – provided that compliance with the order or decision is not required immediately upon service – specify the time limit for compliance with the relevant order, upon the expiry of which a penalty payment becomes due. The penalty payment for non-compliance with the order in question, as well as the time limits from which compliance is required, must be set out in the claimant's application in the statement of claim, in the application for provisional measures or, where applicable, in a separate application (Court of Appeal, Order of 14 October 2025, UPC_CoA_699/2025 – Fuji v Kodak).

339 In accordance with these principles, the requested threat of a penalty payment does not, in principle, give rise to any objections. In particular, the setting of minimum amounts for penalty payments to be paid in the event of a breach is permissible. This is because a maximum amount for penalty payments may, but need not, be specified. Furthermore, such a maximum amount may be exceeded in the event of further infringements. Accordingly, other local divisions have also, in individual decisions, merely specified minimum amounts for potential penalty payments (see Düsseldorf LD, decision of 3 July 2024, UPC_CFI_7/2023 – Kaldewei v Bette; LD Hamburg, decision of 5 November 2025, UPC_CFI_461/2024 – Dolle v Fakro).

340 However, the Court considers the minimum amounts claimed by the Claimant in its applications to be too high. The defendants rightly point out that the minimum amounts do not allow for any downward adjustment. Whilst it appears, taking into account the coercive and punitive nature of the penalty payment, the defendants' prominence and the extent of use of the Netflix service, it would seem appropriate to set a penalty payment of at least EUR 100,000.00 or EUR 1,000.00 per day should the defendants show themselves unwilling to comply with the injunction or their obligations to provide information and account. However, a lower penalty payment appears appropriate if the defendants are, in principle, willing to comply with the court's orders and any breaches are at the lower end of the scale of culpability; for example, where, due to carelessness, the offer of the contested software has not been removed from one of a large number of websites, or where there are doubts regarding the scope of the obligations to provide information and account for transactions, and only

a few details are missing from an otherwise complete and usable set of accounts. In such cases, a lower penalty payment appears appropriate; the court therefore sets the lower limits at EUR 5,000.00 per day for a breach of the injunction and at EUR 250.00 per day for failure to fully comply with the obligations to provide information and submit accounts.

341 Under these circumstances, the threat of a penalty payment does not give rise to any concerns, even from the perspective of proportionality. The threat provides the necessary flexibility to take into account, in the event of a possible breach, the specific circumstances of the individual case – including the conduct of the infringer – and, on that basis, to set an appropriate penalty payment.

342 Insofar as the order imposing penalty payments contains further amendments in relation to the Claimant's application, these are purely editorial in nature.

E Incidental decisions

I. Decision on costs

343 The decision on costs is based on Article 69(1) of the UPC Agreement in conjunction with Rule 118(5) of the RoP. At the oral hearing, the parties agreed that the party losing in either the infringement proceedings or the counterclaim proceedings shall reimburse the prevailing party the sum of EUR 200,000.00; in the event of a complete defeat, the sum shall therefore be EUR 400,000.00.

II. Provisional enforceability

344 Pursuant to Article 82(1) of the UPC Agreement, this decision is enforceable without further orders from the court. No security for enforcement, as requested by the defendants, was required.

1. Legal principles

345 Pursuant to Article 82(2) of the UPC Agreement, read in conjunction with Rule 118.8, sentences 2 and 3, and Rule 352.1 of the RoP, the enforcement of a decision may, where appropriate, be made conditional upon the provision of security or equivalent guarantees which, in particular in the case of (injunctive) orders. According to the case law of the Court of Appeal, it is clear from these provisions that the order for security for enforcement is not necessary in every case; rather, it is at the discretion of the court. It is necessary to balance the patent proprietor's interest in the effective enforcement of their property right against the alleged infringer's interest in the effective enforcement of any claims for damages in the event of a subsequent setting aside of the decision (Court of Appeal, Order of 21 May 2025, UPC_CoA_365/2025 – Yellow Sphere v Knaus Tabbert; Munich local division, decision of 22 August 2025, UPC_CFI_248/2024 – Brita v Aquashield).

346 A case-by-case assessment is therefore always required. The factors to be taken into account when considering whether to order the provision of security include the claimant's financial situation, which may give rise to a legitimate and genuine concern that, should the first-instance decision be set aside or amended, a potential claim for damages cannot be enforced and/or executed, or can only be done so at disproportionate expense. The relevant facts and arguments in this regard must be put forward by the defendant, who bears the burden of proof in this respect. If such a submission has been made, it is incumbent upon the claimant to contest these facts and grounds in a substantiated manner, particularly as the claimant generally has knowledge of and evidence regarding their financial situation. It is also the claimant's responsibility, where appropriate, to explain why, despite the reasons put forward by the defendant, the claimant's interest in enforcing their intellectual property right without the provision of security prevails (Court of Appeal, Order of 21 May 2025, UPC_CoA_365/2025 – Yellow Sphere v Knaus Tabbert; Munich local division, decision of 22 August 2025, UPC_CFI_248/2024 – Brita v Aquashield)).

2. Application to the present case

347 The defendants have not put forward sufficient grounds that would justify making enforcement in the present case conditional upon the provision of security. The Court therefore refrains from ordering such enforcement security.

348 The turnover figures for 2009 relating to a predecessor company of the Claimant, as set out by the defendants (Exhibit QE 5), do not, in principle, provide any indication of the Claimant's financial circumstances. Nor do the Claimant's turnover figures reported by credit reference agencies – amounting to USD 24,000,000.00 or even as little as USD 13,300,000.00 (Exhibit QE 6), do not provide sufficient evidence as to whether there are grounds for a legitimate and genuine concern that, should the first-instance decision be set aside or amended, a potential claim for damages could not be enforced and/or executed, or could only be done so at disproportionate expense.

349 The turnover figures provided are one-off estimates by third parties, usually credit reference agencies, which do not allow for a reliable assessment of the Claimant's financial circumstances. Consequently, the disproportion between legal costs and/or claims for damages and the Claimant's turnover, as put forward by the defendants, does not hold water. No information is provided as to which year the turnover figures relate to, or whether they represent an average over several years. If they relate solely to the turnover of a single year, for example 2024, this says nothing about the turnover of previous years or the business prospects for future years. Furthermore, the turnover for a single year is not directly linked to a company's actual assets. Nor does it provide any information regarding a company's solvency or creditworthiness. In this respect, further information is required regarding the company's business model, its existing tangible assets and rights, its liquidity, and similar factors.

350 On top of all this, the defendants have failed to put forward a coherent case and have therefore not met their burden of presentation and proof. It must be conceded that a claimant must substantively contest a defendant's substantiated submission regarding the claimant's financial situation and, in turn, must present evidence regarding their own financial circumstances. However, in the present case, it is not apparent that the defendants have exhausted all available means of obtaining information necessary for a substantiated submission regarding the Claimant's financial situation. The mere assertion that the Claimant does not publish any financial information is not sufficient for this purpose. It is not clear why no similar or more detailed information could be obtained from credit reference agencies for subsequent years. Nor have any submissions been made regarding the Claimant's business model. In view of the above, in the absence of any fundamental submission regarding the Claimant's financial situation, the Claimant cannot be expected to provide supplementary information of its own accord and to render the defendants' objection conclusive for the first time.

351 Even if the turnover figures provided by the defendants were to give rise to doubts as to the Claimant's financial capacity, it must also be borne in mind that the patent at issue will expire in less than one and a half years. If an appeal is lodged against this decision, a final and binding decision is not expected for at least about a year. The order for security for enforcement to safeguard against any damages arising from enforcement during this period could therefore constitute an insurmountable obstacle for the Claimant in enforcing its patent whilst the patent is still in force. In any event, the Claimant would effectively be able to appeal to the claim for an injunction for only a few months at most, even though the patent at issue has been deemed valid and infringed at first instance. Against this background, the Claimant's interest in enforcing its intellectual property right without the provision of security outweighs the defendant's interest in the order for security for enforcement. In view of all the above, the fundamental legal assessment therefore stands that the decision is enforceable without the provision of security.

III. Value of the claim

352 The determination of the value of the claim is in line with the parties' proposals, to which the court has no objections.

DECISION

A.

The counterclaim for revocation is dismissed.

- B.
I. The defendants are ordered to

1. to refrain

to apply, within the territory of the Kingdom of Belgium, the Republic of Bulgaria, the Kingdom of Denmark, the Federal Republic of Germany, the Republic of Estonia, the Republic of Finland, the French Republic, the Italian Republic, the Republic of Latvia, the Republic of Lithuania, the Grand Duchy of Luxembourg, the Republic of Malta, the Kingdom of the Netherlands, the Republic of Austria, the Portuguese Republic, the Republic of Romania, the Kingdom of Sweden and the Republic of Slovenia, or from providing third parties with

means (software) for a client to carry out a method for the progressive playback of a media sequence stored as a media file on a remote server, wherein the media file contains an index, wherein the method comprises the following steps carried out by the client:

receiving the index from the remote server; determining a starting point within the media sequence; determining, using the index, byte ranges of the media file corresponding to media required to play the media sequence from the starting point; placing the identified byte ranges into a request queue; requesting, from the request queue, the byte ranges required to play the media sequence from the start point; buffering received bytes of information until playback begins; and playing back the buffered bytes of information;

wherein the method also comprises the following steps, performed by the client upon receipt of a user instruction: determining, using the index, byte ranges of the media file corresponding to the media required to play the media sequence in accordance with the user instruction; clearing the request queue; setting up a request queue using the byte ranges identified in response to the user instruction; and requesting the byte ranges from the request queue that are required to play the media in accordance with the user instruction,

wherein the method further comprises the following steps performed by the client:

maintaining a mask indicating the parts of the media file that have been downloaded;

determining, using the mask, whether at least a portion of a byte range required to play the media in accordance with the user's instruction has already been downloaded;

placing in the request queue only those parts of byte ranges that have not already been downloaded from the remote server, in order to play the media in accordance with the user's instructions;

and requesting the byte ranges from the request queue;

to be delivered or offered for use within the territory of the aforementioned contracting member states;

(indirect infringement of claim 1)

2. to provide the claimant with information, in a statement structured for each month of the calendar year, regarding the extent to which they (the defendants) have committed the acts described in Section I.1 since 7 May 2025,

specifying

- a) the origin and distribution channels of the said software, and
 - (i) the names and addresses of the developers, distributors and other previous owners, and
 - (ii) the names and addresses of the commercial customers and the points of sale for which the software was intended,
- b) the quantities downloaded, pre-installed or obtained or ordered by accessing a website, and the prices paid for the software in question,
- c) the identity of all persons acting in a commercial capacity involved in the application of the procedures referred to in Section I.1,

whereby, as evidence of the information provided, copies of the relevant proof of purchase (namely invoices, or alternatively delivery notes) must be submitted, whereby details requiring confidentiality may be redacted from the data subject to disclosure, and whereby the information, together with the proof of purchase, must in any event also be provided in a computer-readable, electronic format;

3. to provide the Claimant, as evidence of the information provided in accordance with Section I.2. plus details of the profit made, with a breakdown of the extent to which they (the defendants) have carried out the acts described in Section I.1. since 7 May 2025, specifying

- a) the individual downloads or page views, broken down by download volumes and number of page views, as well as times, prices and version designations, and the names and addresses of the customers,
- b) the individual offers, broken down by offer quantities, times, prices and type designations, as well as the names and addresses of the recipients of the offers,
- c) the advertising carried out, broken down by advertising medium, circulation figures, distribution period and distribution area, and, in the case of online advertising, the website addresses, the periods of placement and the number of visits,
- d) the production costs, broken down by individual cost factors, and the profit realised,

whereby the statement containing the accounting data must be submitted at least in an electronic format that can be processed by computer,

and copies of the relevant purchase documents (namely invoices, or alternatively delivery notes) must be submitted to substantiate the information provided, whereby details requiring confidentiality may be redacted from the data subject to disclosure,

provided that the defendants retain the option, at their discretion, to disclose the names and addresses of the non-commercial customers and the recipients of the offers, instead of to the Claimant, to a chartered accountant to be designated by the Claimant, who is bound by a duty of confidentiality, provided that the defendants bear the costs thereof and authorise and oblige him inform the claimant, upon specific enquiry, whether a particular delivery or a particular customer or recipient of an offer is included in the list.

II. It is hereby ordered that the defendants are obliged to compensate the Claimant for all damages incurred and to be incurred as a result of the acts referred to in paragraph I.1., which have been committed since 7 May 2025.

III. The defendants shall,

1. in so far as they do not fully comply with the orders set out in paragraph I.1 from the date specified in section D, to pay a recurring penalty of at least EUR 5,000 to the court for each day of delay;
2. insofar as they do not fully comply with the orders set out in paragraphs I.2. and I.3. within three weeks of the date specified under section D.

, to pay a recurring penalty payment of at least EUR 250 to the court for each day of delay;

IV. In all other respects, the action for infringement is dismissed.

C.
The defendants shall bear the costs of the action for infringement and the counterclaim for revocation.

D.
The orders set out in B. I. and B. II. shall only be enforceable once the claimant has notified the court of the part of the orders it intends to enforce and, where necessary, has submitted a certified translation of the orders into the official language of the Member State in which enforcement is to take place, and once the notification and the (relevant) certified translation have been served on the defendants.

E.
The value in dispute for the action for infringement is set at EUR 2,500,000.00 and the value in dispute for the counterclaim for revocation is set at EUR 3,750,000.00.

Dr Daniel Voß (presiding judge)	
Dr Georg Werner (Legally qualified judge)	
Dr Tatyana Zhilova (legally qualified judge)	
Dr Torsten Duhme (Technically qualified judge)	
On behalf of the Deputy-Registrar	

INFORMATION ON APPEALS

Any party whose applications have been rejected in whole or in part may lodge an appeal against this decision with the Court of Appeal within two months of the decision being served (Article 73(1) of the UPC Agreement, Rules 220.1(a) and 224.1(a) of the RoP).

INFORMATION ON ENFORCEMENT (ART. 82 UPC Agreement, ART. 37(2) EPGs, R. 118.8, 158.2, 354, 355.4 of the RoP):

A certified copy of the enforceable decision shall be issued by the Deputy-Registrar on application by the enforcing party, Rule 69 of the Rules of Procedure.

This decision was pronounced in open court on 15 September 2026.

Dr Daniel Voß (presiding judge)