Unified Patent Court
Einheitliches Patentgericht
Juridiction unifiée du brevet

Local Division Mannheim
UPC_CFI_132/2024

Procedural Order
of the Court of First Instance of the Unified Patent Court
issued on 09/07/2025
concerning EP 2 746 957
(preliminary remarks for the preparation of the oral hearing)

CLAIMANT

TOTAL SEMICONDUCTOR, LLC
- 101 E. Park Blvd., Ste 600 - 75074 - Plano, Texas – US

Represented by Thomas Lynker

DEFENDANTS

1) **Texas Instruments Incorporation**
- 12500 TI Blvd - 75243 - Dallas – US

Represented by Klaus Haft

2) **Texas Instruments Deutschland GmbH**
- Haggertystr. 1 - 85356 - Freising – DE

Represented by Klaus Haft

3) **Texas Instruments EMEA Sales GmbH**
- Haggertystr. 1 - 85356 - Freising – DE

Represented by Klaus Haft

PATENT AT ISSUE

European Patent No. EP 2 746 957

PANEL/DEVISION:

Panel of the Local Division in Mannheim

DECIDING JUDGES:

This order was issued by the legally qualified judge Böttcher acting as judge-rapporteur.

LANGUAGE OF PROCEEDINGS: English

SUBJECT-MATTER OF THE PROCEEDINGS: Patent infringement action

In order to ensure an efficient exchange in the course of the oral hearing, the following preliminary views and questions are submitted. They highlight a number of key points and questions, which, in the preliminary opinion of the judge-rapporteur, could be relevant in the oral hearing (without any prejudice to whether underlying written submissions of the parties are to be admitted to the proceedings). The following preliminary remarks do not claim to be exhaustive and are not intended to prevent the parties from raising other points and questions that they consider relevant in the oral hearing. Rather, the following points and questions are by their nature preliminary and open to further discussion in the oral hearing.

In addition, the order serves to conclude the interim procedure.

I. Confirmation of the oral hearing dates

First, the oral hearing date already agreed with the parties is confirmed again and the parties are summoned again:

Tuesday, 22 July 2025, 09.30 CET, Courtroom II, Local Division Mannheim, Schubertstraße 11, 68165 Mannheim.

Both the infringement action and the counterclaim for revocation (hereinafter referred to as **CCR**) will be heard at this hearing.

In case the hearing cannot be concluded within one day, the hearing will continue on **Wednesday, 23 July 2025, 09.30 CET** at the same premises.

Should the parties wish the arrangement of a video link for participants who are not present on site, they are requested to contact the clerks of the Local Division Mannheim by email (contact_mannheim.loc@unifiedpatentcourt.org) by **14 July 2025** for technical details.

In order to facilitate the verification of attendance at the oral hearing, the parties' representatives are requested to inform the presiding judge and the judge-rapporteur by email by **17 July 2025** at the latest of the name and function of the persons who will be attending the oral hearing on behalf of their parties, thereby distinguishing between attendance on site and attendance via video link (if any).

II. Requests

The Local Division Mannheim ruled on the requirements which have to be met if the patent proprietor wishes to defend dependant claims or combination thereof separately (decision of 2 April 2025, UPC_CFI_359/2023, paras. 159 et seqq., appeal pending). Against this backdrop, the request II.3) in Claimant's Defence to the CCR and Application to amend the patent could be subject to concerns.

III. Claim construction (infringement and validity)

Interrupt

Meaning of the term "interrupt" in contrast to other workloads of a processor.

Feature 6.4 (also feature 4 and feature 6.2)

a) How does the understanding that the term "directly coupled" in feature 6.4 requires a direct point-to-point connection fit in with features 6.2, 6.3 and paragraphs [0010] ("on interrupt bus 314" vs "dedicated … lines"), [0011] ("directly connect to the IID 350 and not to the cores 310, 320") and [0013] (potentially discussing an indirect coupling: " … sends an interrupt on peripheral interrupt 475 or 476, respectively, to either processor 480 or processor 485 which is intercepted by IID 450. IID 450 routes the interrupt to …")? What is the technical function of a direct coupling?

b) In the event that the term "directly coupled" is not be characterized by the means of coupling but rather by the requirement that no intermediate functional units exist: Why do functional units that only serve to transport data without changing the recipient or the substantive content of the data (i.e. the message) contradict the assumption of 'directly coupled'? Why do a local and a global clock, which are directly coupled to each other, not form the same functional unit?

Feature 7

a) Does the term "operable" involves that the functionality is already implemented?

b) What does the term "idle state" mean? (sleeping/inactive mode, which may need a wake-up procedure, or just not busy?, cf. para. [0007], para. [0013] at the end)

c) What indication exists that the term "is distributed" necessarily involves a qualified distribution, in particular an even distribution? If so what does "even" mean? ("even" in terms of number, of execution time, of power consumption, …?)

Feature 8

a) To which sub-feature does the phrase 'to maintain …' refer? ("adjusts … to maintain …" or " by sending … to maintain…" or "commands … to maintain …" or "the clock gating unit to maintain …").

b) When is an adjustment given? Is it sufficient to put a second processor to work in the event of a (further) interrupt in order to avoid increasing the frequency and voltage of the first processor to process the interrupt?

c) What does the sub-feature "to maintain a throughput that is the same as that for an equivalent single processor system" mean in this context? Does the time component of the throughput (if any) encompasses idle times? (cf. in particular paras. [0007], [0014] to [0016], Fig. 5, Fig. 6 and Fig. 7)

d) What is the subject-matter of the command sent to the clock gating unit? Does it necessarily include a command regarding voltage adjustment or could this be achieved separately? What indications are

there that it is the clock gating unit which (also) executes the voltage adjustment? (cf. paras. [0005], [0007], [0008], [0010], [0016], [0016]).

e) Which unit is in control of the adjustments to frequency and voltage?

Intelligent Interrupt Distributor (hereinafter referred to as **IID**) and clock gating unit

What are the characteristics and functionalities of an IID according to the patent-in-suit? What makes an interrupt distributor intelligent in the sense of the patent? Can a functional unit that distributes interrupts, together with a functional unit that is able to generally control/optimize the power/work-load management of the processors, be considered an IID?

Is the functionality of the clock gating unit characterized solely by feature 8, or does the clock gating unit have additional functions such as the capability to pause the clock?

IV. Validity

Person skilled in the art

Are the parties' private experts representative of the skilled person in the art in terms of average knowledge and skills?

General common knowledge (hereinafter referred to as **GCK**)

It may be worth discussing, to what extent and under what conditions the content of patent documents, conference submissions, articles (including Wikipedia), etc. are suitable for establishing GCK at the priority date in the case at hand and do not merely represent publicly available knowledge.

Technical background: task/interrupt

Since several prior art documents seem to relate to tasks only: why was task handling/parallelisation the same as or comparable to interrupt handling in terms of requirements, encountered difficulties, procedures, (power, performance) management, etc. at the priority date?

Design as shown in Fig. 3 of exhibit D CC 3:

In particular, it could be discussed why the skilled person, based on GCK, would inevitably arrive at a design as shown in Fig. 3 of the expert opinion (exhibit D CC 3) with regard to the elements, their functionalities and their couplings.

D CC 1 / Panda

It may be discussed why the skilled person would transfer the concept of parallel processing of a task (which saves power in comparison to a single processor system due to reduced voltage and frequency) to the distribution of interrupts, thereby implementing all sub-features of feature 8 and using an idle processor (feature 7).

D CC 2 / Lee

It may be discussed what the subject of the throughput addressed in section 2.1 of D CC 2a / Lee is. Taking the description of formula (1) therein and the introduction under section 2 into account, the subject seems to be the throughput for an application that is parallelised (similar to D CC 1 /Panda). Is there any disclosure in D CC 2a / Lee, which relates to the distribution of several interrupts? If not, why would the skilled person in the art transfer the concept in section 2.1 of D CC 2a / Lee to the distribution

of interrupts, thereby implementing all sub-features of feature 8 and using an idle processor (feature 7)?

What is the context of slide 5 of D CC 2b / Lee? Is it the same as in D CC 2a / Lee? The parties seem to agree that D CC 2a / Lee and D CC 2b / Lee have the same technical content (SoD-CCR, Fn. 7 on page 17; Reply-CCR, para. 90).

Can it be left open whether D CC 2a Lee and D CC 2b Lee constitute one single source of disclosure, taking their disclosure as single documents into account?

D CC 6 / Belleudy

Where does D CC 6 / Belleudy disclose that a throughput is maintained that is the same as that for an equivalent single processor system?

The parties seem to agree that D CC 6 / Belleudy deals with the scheduling/handling of tasks. Why would the skilled person in the art transfer the concept to the distribution of interrupts, thereby implementing all sub-features of feature 8 and using an idle processor (feature 7)?

D CC 4 / Wolfe

I may be discussed why a clock gating unit and its direct coupling to the interrupt controller are (implicitly) disclosed. In the event that a DVFS unit is implicitly disclosed: Defendants seem not to allege that such a DVFS unit would also pause the clock.

D CC 5 / Uchiyama and D CC 5a / Hoang

It may be discussed whether D CC 5 / Uchiyama and D CC 5a / Hoang disclose that an interrupt is distributed to an idle core, whether the interrupt controller ITNC is directly coupled to the cores and whether both documents form a single source of disclosure.

Inventive step/Motivation

As far as elements are known in the prior art (including GCK): what is the motivation of the skilled persons to combine the elements in a way that results in the teaching of the patent-in-suit, in particular, using an IID, which uses a processor in idle state and implements all sub-features of feature 8?

V. Infringement

The focus of the discussions on the infringement might be on the fulfilment of feature 8 and the assessment of the indicative circumstances, which the Claimant has put forward as (indicative) evidence of the fulfilment of feature 8.

VI. Value of the dispute

The Claimant has stated the value in dispute in the infringement action as EUR 5.000.000. The Defendants have stated the value in dispute in the CCR as EUR 5.000.000 corresponding to the value in dispute of the infringement action indicated by the Claimant. In the absence of better information, the judge-rapporteur sets the value in dispute for the infringement action at EUR 5.000.000 and the value in dispute for the CCR at EUR 5.000.000 (R. 370.6, R. 104 (i) RoP).

VII. Upload of documents

If the party representatives intend to present diagrams, figures, overviews or other graphic aids in the course of their statements at the oral hearing for the purpose of explanation, they are required to upload these in advance in this workflow. The content of such presentations must be strictly limited to the content of the exchanged written pleadings and exhibits. This does not imply approval of any submission that goes beyond the regular written pleadings and their permissible content. In particular, this does not approve any previous written submissions whose admissibility has not yet been decided or whose late submission has been objected to.

VIII. Estimate of costs

The parties are requested to submit a provisional estimate of the costs of the dispute that they intend to claim (R. 104(k) RoP).

IX. Time periods

The parties have to comply with section VIII above until **16 July 2025**. They are given the opportunity until **17 July 2025** to upload presentations in accordance with section VII above. The interim procedure will be closed immediately after 17 July 2025.

The parties are requested to use the options provided in this workflow to upload the relevant submissions. If technical problems arise, the parties are permitted to use R. 9 RoP applications with regard to the main proceedings for uploading.

For the aforementioned submissions, only the Defendant 1 was technically selected in the CMS on the Defendants' side in order to avoid multiple uploads of a potentially uniform submission. Should the other Defendants wish to upload a separate, differing submission, they are free to do so alongside the submission of the Defendant 1 in this workflow. If no presentation is planned for the oral hearing, the respective side is asked to click the corresponding button in the CMS after the deadline of 16 July 2025 to indicate that no comment will be made, as otherwise the workflow will not return to the court.

ORDER DETAILS

Order no. ORD_69375/2024 in ACTION NUMBER: ACT_14978/2024
UPC number: UPC_CFI_132/2024
Action type: Infringement Action

Issued in Mannheim on 9 July 2025

NAME AND SIGNATURE

Dirk Andreas Böttcher

Digital unterschrieben von Dirk Andreas Böttcher
Datum: 2025.07.09 20:18:36 +02'00'

Böttcher
Legally qualified judge