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**Datasheet for the decision
of 9 December 2025**

Case Number: T 1723/23 - 3.5.06

Application Number: 16781626.3

Publication Number: 3360042

IPC: G06F9/54

Language of the proceedings: EN

Title of invention:

DISTRIBUTED EXTENSION EXECUTION IN COMPUTING SYSTEMS

Applicant:

Microsoft Technology Licensing, LLC

Headword:

Remote extension execution/MICROSOFT

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (no)

Decisions cited:

T 1437/09, T 0056/87

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

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Case Number: T 1723/23 - 3.5.06

D E C I S I O N
of Technical Board of Appeal 3.5.06
of 9 December 2025

Appellant: Microsoft Technology Licensing, LLC
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Redmond, WA 98052-6399 (US)

Representative: Grünecker Patent- und Rechtsanwälte
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 11 July 2023
refusing European patent application No.
16781626.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Müller
Members: G. Zucka
K. Kerber-Zubrzycka

Summary of Facts and Submissions

- I. The appeal is against the decision by the examining division, dispatched with reasons on 11 July 2023, to refuse European patent application 16781626.3, on the basis that the claims of the main request and auxiliary requests 1, 5 and 6 contained added subject-matter (Article 123(2) EPC), and auxiliary requests 2 to 4 did not satisfy the requirements of Article 56 EPC.

- II. The following document cited during the first instance procedure is referred to in the present decision:

D5: Winson Y S Li *et al.*: "JSCLoud: Toward Remote Execution of JavaScript Code on Handheld Devices", 12th International Conference on Quality Software (QSIC), IEEE, 27 August 2012 (2012-08-27), pages 240-245, XP032262147, DOI: 10.1109/QSIC.2012.14, ISBN: 978-1-4673-2857-9.

- III. A notice of appeal was received on 26 July 2023, the appeal fee being paid on the same day. A statement of grounds of appeal was received on 13 September 2023.

- IV. The appellant requested
 - (a) that the decision of the examining division to refuse the application be set aside and a patent be granted on the basis of claims 1 and 2 of the main request or the single claim 1 of one of auxiliary requests 1 to 6 underlying the decision under appeal, all re-filed with the statement of grounds of appeal;

(b) that the case be remitted to the examining division for further decision on novelty and inventive step if the requirements of Article 123(2) EPC were met for either the main request or auxiliary request 1.

V. The board issued a summons to oral proceedings, in the annex to which it set out its preliminary opinion, according to which the appealed decision should be upheld.

VI. The appellant filed no response to the summons. It maintains its requests mentioned under IV.(a) above.

VII. The further text on file is:

description pages
3 to 18 as published,
1 and 2 received on 13 October 2021;

drawing sheets
1 to 8 as published.

VIII. Claim 1 of the main request reads as follows:

"A method for distributed extension execution, comprising:

receiving a user input at a client device for initiating an extension in a web browser, the user input indicating whether the extension is to be executed locally on the client device or by a remote computing facility, the extension being associated with a website and including a computer program having codes that extend functionality of the website;

in response to the received user input, establishing a communications link between the client

device and a remote computing facility via a computer network;

transmitting a request for initiating the extension from the client device to the remote computing facility via the established communication link; and

receiving, at the client device, data representing execution results of the requested extension from the remote computing facility."

- IX. Compared to the main request, claim 1 of auxiliary request 1 adds the features of claim 2 of the main request, viz. the following features:

"wherein receiving the user input includes receiving the user input having a designator indicating whether the requested extension is to be executed locally on the client device or by the remote computing facility; and

the method further includes:

determining whether the requested extension is to be executed locally on the client device or by the remote computing facility according to the associated designator; and

in response to determining that the requested extension is to be executed remotely, transmitting the request for initiating the extension from the client device to the remote computing facility via the established communication link".

- X. Claim 1 of auxiliary request 2 reads as follows:

"A method for distributed extension execution, comprising:

receiving a user input at a client device for initiating an extension in a web browser, the user input indicating whether the extension is to be

executed locally on the client device or by a remote computing facility, the extension being associated with a website and including a computer program having codes that extend functionality of the website;

wherein receiving the user input includes receiving the user input having a designator indicating whether the requested extension is to be executed locally on the client device or by the remote computing facility;

in response to the received user input, establishing a communications link between the client device and a remote computing facility via a computer network;

determining whether the requested extension is to be executed locally on the client device or by the remote computing facility according to the associated designator; and

in response to determining that the requested extension is to be executed remotely, transmitting the request for initiating the extension from the client device to the remote computing facility via the established communication link; and

receiving, at the client device, data representing execution results of the requested extension from the remote computing facility[.]"

XI. Compared to auxiliary request 2, claim 1 of auxiliary request 3 includes the following additional features:

"wherein the client device comprises a web browser including a shell component and a control component;

wherein the shell component loads a web page from the website and includes a domain resolver that determines an IP address of a web server hosting the website, and wherein the shell component manages communications between the web browser and any remotely executed extensions;

wherein the control component manages execution of the extensions being associated with the website and wherein the control component receives the user input requesting remote execution of the one or more extensions and, in response thereto, establishes the communication link between the client device and the remote computing facility".

XII. Compared to auxiliary request 3, claim 1 of auxiliary request 4 includes the following additional features:

"wherein the control component further provides and executes at least one extension locally and wherein the control component establishes an extension link with one or more extension servers to retrieve extension instructions associated with the at least one extension that is to be executed locally;

wherein the extension link is separate from and different to the communication link".

XIII. Claim 1 of auxiliary requests 5 and 6 is identical to that of respectively auxiliary requests 3 and 4, except that the "designator" is left out.

XIV. At the end of the oral proceedings, the chairman announced the board's decision.

Reasons for the Decision

1. *The application*

The application relates to website extensions ([0001]). Limited resource availability on the client computer ([0004]) is dealt with by having at least part of the extension execute remotely ([0005]).

2. *Possible procedural violation*

In its annex to the summons (point 6), the board had expressed a preliminary opinion that the examining division had not committed a procedural violation. A final opinion and decision on this issue is not required, given the board's finding that the appeal is not allowable (Rule 103(1)(a) EPC).

3. *Clarity (Article 84 EPC) and added subject-matter (Article 123(2) EPC)*

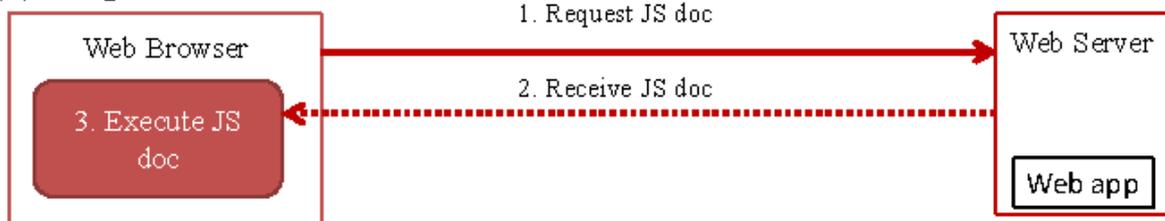
In its annex to the summons (points 4, 5, 7, 8, 10 and 14), the board had expressed a preliminary opinion on the issues of clarity (Article 84 EPC) and added subject-matter (Article 123(2) EPC). A final opinion and decision on those issues is not required, given the board's finding that none of the requests satisfy the requirements of Article 56 EPC.

4. *Document D5*

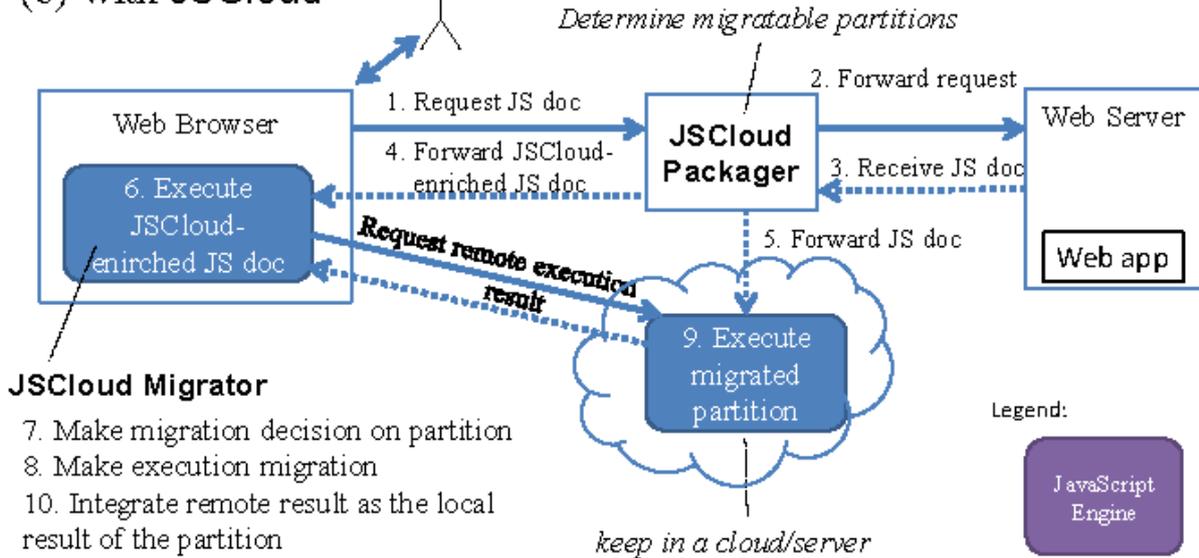
The "JSCloud" system disclosed in D5 and depicted in the following figure (D5, figure 2(b)) provides for the

remote execution of parts of the Java Script (JS) code which would otherwise be executed locally by a web browser:

(a) Original



(b) With JScloud



In that system, the following events take place:

- (a) A web browser executing a Java Script based web application requests and receives, through an intermediate "JScloud Packager", the Java Script code ("JS doc") from a web server (steps 1 to 4).
- (b) As part of this process, the intermediate Packager, after receiving the Java Script code from the web server, determines which JS functions could be "migrated", i.e. executed remotely, without

difficulty. It marks (annotates) the concerned "partition" (the code between entry and exit of the function) as "legitimate".

- (c) The Packager adds "preamble" code to the annotated JS code. This "preamble" contains the code for a "JScloud Migrator" as well as code to allow the JS functions to be migrated to the cloud or a remote server for remote execution.
- (d) Instead of the original JS code from the web server, the browser receives from the "JScloud Packager" a "JScloud-enriched JS doc", i.e. the annotated JS code with the preamble (step 4 in figure 2(b)).
- (e) The Packager sends the necessary JS code to the remote server, to enable it to execute the migrated JS functions (step 5).
- (f) The "JScloud Migrator" decides which JS functions are to be executed locally by the web browser, and which functions are to be executed remotely by the cloud or the remote server (step 7). It also requests such remote execution and prepares the sending of input data (JS objects) to and receiving of output data from the remote server (step 8).

5. *Main request - inventive step; Article 56 EPC*

5.1 The board considers document D5 to be a suitable starting point for an inventive step analysis. The document discloses a method for distributed extension execution.

5.1.1 The method comprises receiving an input at a client device for initiating an extension in a web browser; see Figure 2(b), step 1 "Request JS doc".

- 5.1.2 A decision is taken (by the JSCLoud Migrator - step 7) whether the extension is to be executed locally on the client device or by a remote computing facility.
- 5.1.3 The extension is associated with a website and includes a computer program having codes (Java Script code) that extend functionality of the website.
- 5.1.4 In response to the received user input, a communications link (arrows in figure 2(b)) is established between the client device ("Web Browser") and a remote computing facility ("Cloud/Server") via a computer network.
- 5.1.5 The method of D5 determines whether the requested extension is to be executed locally on the client device or by the remote computing facility (step 7).
- 5.1.6 In response to determining that the requested extension is to be executed remotely, the request for initiating the extension from the client device to the remote computing facility is transmitted via the established communication link ("Request remote execution").
- 5.1.7 The client device receives data representing execution results of the requested extension from the remote computing facility (dotted arrow "result").
- 5.2 The difference between the subject-matter of claim 1 of the main request and the disclosure of D5 is therefore that it is the user input which indicates whether the requested extension is to be executed locally on the client device or by the remote computing facility.
- 5.3 One might question whether the clause "receiving a user input at a client device" implies the involvement of a

"user" providing such input or whether input provided by other means might be indistinguishable from "user input". Leaving that aside, the board considers it obvious to involve the user, either by asking for confirmation or by allowing the user to make the choice themselves, e.g. when they notice that the network is unavailable or when they expect an imminent and unacceptable increase in latency or instability, such as on a train which is about to enter a tunnel. The effects of high latency and instability are mentioned in D5, page 244, section B "Comparative Effects of JSCloud Migrator".

This is all the more true as the skilled person will read that D5 (page 241, right column) already considers the possibility of a manual override of the automated process, viz. by allowing the web application developer to exclude from the onset some code from the possibility of migration.

- 5.4 During the oral proceedings before the board, the appellant cited T 1437/09 (where point 3.3 of the Reasons would be relevant), and argued that the skilled person would not abandon the main technical teaching of D5, which uses a completely automated process, not involving the user.

According to the board, however, nothing indicates in D5 that the user should be completely left out of the process, and the teaching of D5 does not exclude manual intervention, which would be a common measure in a technical process.

- 5.5 The board therefore concludes that the subject-matter of claim 1 of the main request is not inventive (Article 56 EPC).

6. *Auxiliary request 1*

6.1 The appellant conceded during the oral proceedings before the board that the term "designator" in claim 1 of auxiliary request 1 simply corresponds to the indication by the user input whether the extension is to be executed locally on the client device or by a remote computing facility. The term is, therefore, superfluous and introduces no additional limitation in the claim, contrary to the applicant's statement in its letter received on 24 April 2023 (point 2.1, second paragraph).

6.2 The remaining additional feature in the claim, viz. that the transmission of the request for remote execution happens in response to the determination that this should be done, is disclosed in D5; see 5.1.6 above.

6.3 The subject-matter of claim 1 of auxiliary request 1 is, therefore, also not inventive (Article 56 EPC).

7. *Auxiliary request 2*

The scope of claim 1 of auxiliary request 2 does not differ from that of auxiliary request 1. The subject-matter of that claim is, therefore, also not inventive (Article 56 EPC).

8. *Auxiliary request 3*

8.1 Compared to auxiliary request 2, the claim of auxiliary request 3 contains the following additional features:

(a) The client device comprises a web browser

- (b) The web browser includes a shell component which loads a web page from the website and includes a domain resolver that determines an IP address of a web server hosting the website, the shell component managing communications between the web browser and any remotely executed extensions.

- (c) The web browser includes a control component which manages execution of the extensions being associated with the website and receives the user input requesting remote execution of the one or more extensions and, in response thereto, establishes the communication link between the client device and the remote computing facility.

8.2 **Feature (a)** is disclosed in D5 (Figure 2(b): "Web Browser").

The "shell component" of **feature (b)** corresponds to a standard browser's browser engine and networking component, including a DNS resolver.

The "control component" of **feature (c)** corresponds to the part of the web browser which executes steps 5.1.1 to 5.1.6 mentioned above.

8.3 The appellant argues (statement of grounds of appeal, page 9, fourth paragraph) that the additional features allow separation and parallel execution of tasks.

The mere separation in the above two components, however, does not in itself allow a parallel execution of tasks. The claim as presently formulated does not include any parallelisation mechanism, and it is not apparent from the claim which tasks would or could be

executed in parallel. Nothing would lead for instance to the conclusion that the extensions in the claimed method are executed in parallel and not in series.

8.4 The board holds, therefore, that the subject-matter of claim 1 of auxiliary request 3 is also not inventive (Article 56 EPC).

9. *Auxiliary request 4*

9.1 Compared to auxiliary request 3, claim 1 of auxiliary request 4 contains the additional feature that the control component further provides and executes at least one extension locally and establishes an extension link with one or more extension servers to retrieve extension instructions associated with the at least one extension that is to be executed locally, the extension link being separate from and different to the communication link.

9.2 In D5 (see Figure 2(b)), the client ("Web Browser") retrieves extension instructions ("JS doc") from an extension server ("Web Server"). The link which is used for this purpose (depicted schematically in the figure) may be called an "extension link".

The same figure in D5 schematically shows what may be called a "communication link" between the client and the remote computing facility ("cloud/server") which executes extensions remotely ("migrated partitions") on request. The link is schematically represented by two arrows labelled "request remote execution" and "result".

The appellant argued in the statement of grounds of appeal (page 11, third paragraph), and repeated during

the oral proceedings before the board, that Figure 2 of document D5 only schematically depicts what entity communicates with another entity. D5 does not clearly and unambiguously disclose two separate links. All communication may very well pass through the "JSCLoud Packager".

The board, however, points out that in D5 the client is linked to two different entities, viz. the Web Server and the cloud/server. It would, therefore, be the obvious choice for the skilled person to provide two separate links, given that D5 does not indicate or imply that the communication link should also pass through the "JSCLoud Packager", or that this would even be preferable.

It cannot be excluded that in D5 both links partially overlap at a physical level, but this would also be the case in the claimed method, where communication takes place via the Internet (implicit from the expressions "web", "website" and "IP address"): Some data transmitted over the "extension" and the "communication link" will likely share the same physical path. It is further noted in this respect that the alleged advantage of avoiding congestion (*ibid.*, page 13, fourth paragraph) could only be achieved where no such physical-level overlap exists.

9.3 During the oral proceedings before the board, the appellant questioned the relevance of figure 2(b) for the disclosure of D5, referring to the "Case Law of the Boards of Appeal", 11th edition (July 2025), I.C.4.6, in particular to T 56/87, which states in its "Headnote" that "a technical feature which is derived from or based on dimensions obtained from a diagrammatic representation and which technically

contradicts the teaching of the description, does not form part of the disclosure of this document".

Figure 2(b) of D5 is not, however, a "diagrammatic representation" as the figure discussed in T 56/87, and specifically none from which one might want to derive measures, scales or relative positions of the depicted components. Moreover, in the case of D5 no contradiction between the figure and the description is apparent; as far as can be established, the content of figure 2(b) is entirely in line with the corresponding part of the description.

9.4 The board, therefore, holds that the subject-matter of claim 1 of auxiliary request 4 is also not inventive (Article 56 EPC).

10. *Auxiliary requests 5 and 6*

Claim 1 of auxiliary requests 5 and 6 is identical to that of respectively auxiliary requests 3 and 4, except that the term "designator", which was found not to introduce any limitation, is left out (see above). Auxiliary requests 5 and 6, therefore, do not satisfy the requirements of Article 56 EPC for the same reasons as given under respectively points 8. and 9. above for respectively auxiliary requests 3 and 4.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



L. Stridde

M. Müller

Decision electronically authenticated