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**Datasheet for the decision
of 1 June 2023**

Case Number: T 2177/19 - 3.4.03

Application Number: 11832927.5

Publication Number: 2622559

IPC: G06Q30/00, G06Q50/00,
G06Q30/02, G06F17/30

Language of the proceedings: EN

Title of invention:

SECURELY RENDERING ONLINE ADS IN A HOST PAGE

Applicant:

Microsoft Technology Licensing, LLC

Headword:

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (yes) - mixture of technical and non-technical features

Decisions cited:

Catchword:



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Boards of Appeal
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Case Number: T 2177/19 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 1 June 2023

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

Representative: Goddar, Heinz J.
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 14 February
2019 refusing European patent application No.
11832927.5 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman T. Häusser
Members: A. Böhm-Pélissier
E. Mille

Summary of Facts and Submissions

I. The appeal is against the decision of the Examining Division to refuse patent application No. 11 832 927. The refusal was based on lack of inventive step (Article 56 EPC) for all requests then on file.

II. Reference is made to the following **documents**:
(cited in the European search report)

D1 = US 2007/300064 A1

D2 = US 2009/328063 A1

D3 = US 2009/299862 A1

III. The appellant (applicant) **requests** (see both letters of 22 March 2023, respective page 1) as a main request that the decision be set aside and a patent be granted in the following version:

Claims: No. 1 to 14 filed as "NEW AUXILIARY REQUEST 1" with the letter dated 22 February 2022;

Description: Pages 1 to 23 filed with the second letter dated 22 March 2023;

Drawings: Sheets 1/8 to 8/8 as published.

Alternatively it is requested that the decision be set aside and a patent be granted based on the claims of auxiliary requests 1 to 4 (former "NEW AUXILIARY REQUEST 2" to "NEW AUXILIARY REQUEST 5" as filed with the letter dated 22 February 2023).

IV. **Claim 1** according to the **main request** reads as follows (labelling "(A)", "(B)", ... and highlighting/~~strike-through~~ of amendments with respect to claim 1 of the main request discussed before the examining division were inserted by the board):

(A) A computer-based method (200) for rendering online ads on a page, the method comprising:

(B) creating a first inter-frame communication channel comprising a first communication channel between a first cross-domain frame and a host page, where the first cross-domain frame comprises content from a first domain different than a domain of the host page (206); and

(C) creating a second inter-frame communication channel comprising a secure second communication channel that passes data between from the first cross-domain frame to the host page and then to a second cross-domain frame in the host page,

(D) wherein the second cross-domain frame comprises content from a the second first domain ~~different than the domain of the host page~~ (210),

(E) wherein content from the first cross-domain frame communicates a request to interact with the second cross-domain frame in order to initiate an interactive ad with the second cross-domain frame,

(F) including passing ad content from the first cross-domain frame to the second cross-domain frame as an animation.

Claim 10 according to the **main request** reads as follows (labelling "(A')", "(B')", ... were inserted by the board):

(A') A system (500) for coordinating online ad content on a host page, the system comprising:
a processor (502) configured to process data for the system;
(B') a frame-host communication channel creation component (504) operably coupled with the processor, and configured to create a frame-host communication channel between the host page and a first cross-domain frame hosted in the host page, where the first cross-domain frame comprises content from a first domain different than a domain of the host page; and
(C') a frame-frame communication channel creation component (506) operably coupled with the processor, and configured to create a secure frame-frame communication channel that passes data from the first cross-domain frame to the host page and then to a second cross-domain frame hosted in the host page,
(D') where the second cross-domain frame comprises content from the first domain,
(E') wherein content from the first cross-domain frame communicates a request to interact with the second cross-domain frame in order to initiate an interactive ad with the second cross-domain frame,
(F') including passing ad content from the first cross-domain frame to the second cross-domain frame as an animation.

V. The appellant **argued** essentially as follows in relation to inventive step:

- (a) Neither D1 nor D3 disclosed - at least partially - features (C) to (F);
- (b) None of the cited documents D1 to D3 disclosed or taught that the second cross domain frame comprises content from the first cross-domain frame such that an interactive and animated ad is created.

Reasons for the Decision

1. The invention as claimed

- 1.1 The aim of the invention is to propose a system for securely serving online ads on a host webpage, while allowing for rich media functionality of the online ads ("interactive animations"), but not allowing undesirable attacks by malicious third parties (paragraph [0009] of the description of the application). Furthermore, the proposed systems provides a better ad provider experience when webpage hosts update their content, as the ad content can be integrated relatively seamlessly with the webpage content as intended, for example, inside a secure box that is separated from the host page content.
- 1.2 For rendering online ads on a webpage, a first inter-frame communication channel ("first iFrame channel") is created (paragraph [0010]). The first inter-frame communication channel comprises a first communication channel between a first cross-domain frame (e.g. for securely hosting ad content) and a host page. The first cross-domain frame comprises content (e.g. ad content from an ad syndicator) from a domain that is different from that of the host page. Furthermore, a second inter-frame communication channel ("second iFrame channel") is created, which comprises a second communication channel between the first cross-domain frame and a second cross-domain frame (e.g. for hosting additional ad content from the same or a different ad owner or syndicator) in the host page.

1.3 Communication takes place between the two cross-domain frames such that interaction between two ads can take place as an animation. Content from the first cross-domain frame is passed to the second cross-domain frame, such that content of the two cross-domain frames is the same, i.e. the second cross-domain frame comprises content from the first cross-domain frame (and vice versa, cf. paragraph [0037]).

2. Main Request

2.1 Amendments - Article 123(2) EPC

2.1.1 The present claim 1 of the main request is a combination of original claims 1 and 7, paragraph [0037] (second and third sentence) and [0038] (first and second sentence) of the description as originally filed. Feature (C) (the second cross-domain frame comprises content from the first cross-domain frame) is disclosed in original claim 7 in combination with paragraph [0037] (... the *first and second cross domain frames can comprise content from the same domain. ... content from the first and second domains ... a reference location in the host page for the first frame can be passed to the second frame, and vice versa*). Therefore, since the first and second domains comprise the "same content" (original claim 7) and content from the first cross-domain frame is passed to the second cross-domain frame, the second cross-domain frame comprises content from the first cross-domain frame (cf. also paragraph [0063] and Figure 6).

2.1.2 Features (A') to (F') of system claim 10 correspond to features (A) to (F) of method claim 1, but are formulated as structural system features. Dependent claims 2 to 9 and 11 to 14 correspond to original

claims 2 to 6, 8 to 10 and 12 to 15 and were adapted to the new independent claims 1 and 10.

2.1.3 Consequently, the claims satisfy the requirements of Article 123(2) EPC.

2.2 Technicality

2.2.1 Advertisements as such are considered non-technical. However, in the present context the advertisement is an ad on a webpage in the form of a digital web content ("html script", see paragraph [0022] of the description of the application). Ads according to the general understanding of the skilled person in the context of webpages are concepts which are e.g. realised as webpage programming code, digital pictures, film clips or computer animation. These technical implementations of ads are considered technical. Features (E) and (F) relate to communicating requests and creating an interactive ad in the form of a (computer) animation (such as an ad that *drops a burger bun top from the first frame onto a burger in the second frame, then drops the burger and bun top from the second frame to a bottom bun in a third frame*, cf. description, paragraph [0038]). Therefore, these features also have to be considered entirely technical even if the purpose (advertisement) is non-technical.

2.2.2 Consequently, the Board is of the opinion that all the features of claim 1 are technical.

2.3 Closest prior art

The examining division has chosen D1 as closest prior art document. However, D1 is silent about placing ads on a website. The board agrees with the appellant that

D1 is a less suitable spring-board for the problem and solution approach than document D3 and therefore considers this document as closest prior art. D2 is more remote.

2.4 D3

2.4.1 D3 discloses (see Figures 4 and 5; paragraphs [0031] to [0032] and [0037] to [0038]) that ad content generated by an ad owner (404) is inserted into an IFrame (408) in a host webpage (406) published by a website host (402). The ad owner (404) has only access to content inside the IFrame (408) and is barred from interacting with the webpage (406). A communication channel (410) is created between the IFrame (408) and the host webpage (406) to support the ad functionality.

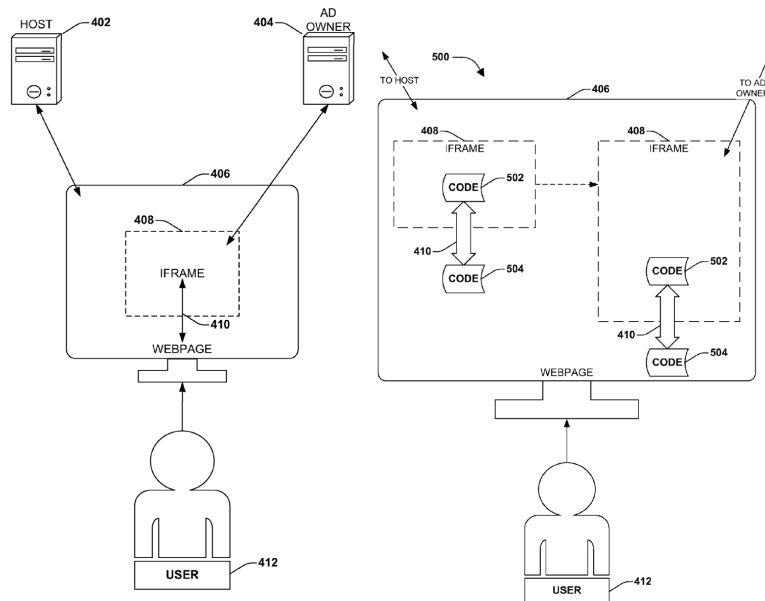


FIG. 4

FIG. 5

D3

2.4.2 In the embodiment of Figure 5 additional codes (502, 504) are loaded into the IFrame (408) and webpage (406), respectively. The codes allow only "white-listed" actions, i.e. filters out not allowed action

thus providing increased security against malicious actions (phishing etc.). In this way a modified communication channel is created.

2.5 D1

2.5.1 D1 teaches two separate IFrames (116 and 118) and communication between the IFrames (Figures 2, 4, 10, 11, paragraph [0035]).

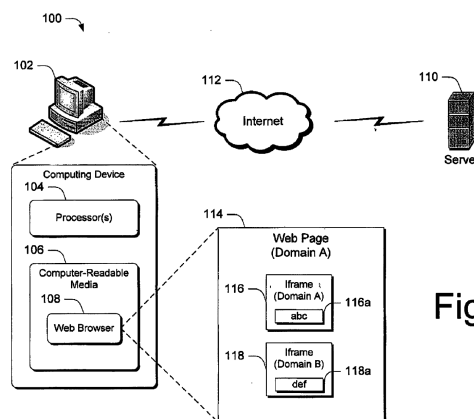


Fig. 2

D1

2.6 Difference

2.6.1 The appellant argued that the non-modified communication channel and the modified communication channel had to be considered one and the same channel and not two separate (first and second) channels. In addition, nothing in D3 disclosed or taught to create an additional communication channel. Therefore, D3 failed to disclose a second communication channel. Furthermore, D1 and D3 were silent about animations.

2.6.2 The board agrees with this assessment. Therefore, D3 fails to disclose features (C) to (F) at least in part.

2.7 Effect - problem

2.7.1 The differences have the effect of

- (i) (features (C) and D)): secured and interactive cross domain data exchange between two cross-domain frames;
- (ii) (features (E) and (F)): allowing an interactive animation of the online ad within several ad-spaces in the host webpage, but not allowing undesirable attacks by malicious third parties.

2.7.2 The appellant formulated the technical problem to be solved as "how to securely serve an online ad on a host webpage, while allowing for an interactive animation of the online ad within several ad-spaces in the host webpage, but not allowing undesirable attacks by malicious third parties" (see the letter of 22 February 2023, page 8, last paragraph).

2.7.3 The board partially agrees with this formulation, but reformulates the problem to be solved more specifically in view of effects (i) and (ii) as "providing an animated, secured and interactive cross domain data exchange between two cross-domain frames in order to improve flexibility and security of communication of embedded content in websites".

2.8 **Non-obviousness**

ad (i)

2.8.1 D3 discloses only one single IFrame channel. D1 teaches two IFrames and a cross domain data exchange between the two IFrames (see paragraph [0035]). However, D1 does not teach communication between two IFrames such that content from an external domain is communicated to a first frame and from the first frame via the host page to a second frame.

2.8.2 Since D1 and D3 do not disclose or suggest inter-channel communication in the sense of the claim wording, the combination of the teachings of D1 and D3 does not lead to the combination of features (A) to (D), in particular that content from the first frame is communicated to the host page and then to the second frame such that the second frame comprises content from the first frame (features (C) and (D)).

ad (ii)

2.8.3 D3 discloses pop-up windows, which could be considered as animations. However, these pop-up windows are not disclosed in the context of the embodiment of Figure 5 of D3, i.e. within an IFrame, and are not an animation which could be considered the result of a communication between two IFrames. D1 fails to disclose or suggest exchange of ad content between IFrames.

2.8.4 Therefore, D1 and D3 do not reveal or suggest an animation within a single IFrame, let alone within two IFrames. Consequently, nothing in D1 or D3 would lead the skilled person to features (E) and (F).

2.8.5 Consequently, the subject-matter of claim 1 is inventive (Article 52(1) EPC) within the meaning of Article 56 EPC. The same reasoning applies to the corresponding system claim 10. Claims 2 to 9 and 11 to 14 depend upon claims 1 or 10, respectively.

3. **Summary**

3.1 The subject-matter of claims 1 to 14 of the main request involves an inventive step. The board notes that the description has been adapted to the claims of the main request. Hence a patent is to be granted on the basis of this request.

3.2 Therefore, auxiliary requests 1 to 4 do not need to be examined.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent in the following version:

Claims: No. 1 to 14 filed as "NEW AUXILIARY REQUEST 1" with the letter dated 22 February 2022;

Description: Pages 1 to 23 filed with the second letter dated 22 March 2023;

Drawings: Sheets 1/8 to 8/8 as published.

The Registrar:

The Chairman:



S. Sánchez Chiquero

T. Häusser

Decision electronically authenticated