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**Datasheet for the decision  
of 12 September 2017**

**Case Number:** T 1693/12 - 3.5.07

**Application Number:** 07024619.4

**Publication Number:** 1990742

**IPC:** G06F17/30

**Language of the proceedings:** EN

**Title of invention:**

Mobile communication device and method for managing bookmark thumbnail images

**Applicant:**

LG Electronics Inc.

**Headword:**

Bookmark-thumbnail images/LG ELECTRONICS

**Relevant legal provisions:**

EPC Art. 56, 123(2)

**Keyword:**

Inventive step - main request and auxiliary requests 2 and 3  
(no)  
Amendments - auxiliary request 1 - added subject-matter (yes)

**Decisions cited:**

T 1834/10



**Beschwerdekammern**  
**Boards of Appeal**  
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Case Number: T 1693/12 - 3.5.07

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.07**  
**of 12 September 2017**

**Appellant:** LG Electronics Inc.  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted on 14 March 2012  
refusing European patent application No.  
07024619.4 pursuant to Article 97(2) EPC.

**Composition of the Board:**

**Chairman** R. Moufang  
**Members:** R. de Man  
M. Jaedicke

## Summary of Facts and Submissions

I. The applicant (appellant) appealed against the decision of the Examining Division refusing European patent application No. 07024619.4.

II. The decision cites the following documents:

D1: EP 1 100 025 A1, 16 May 2001; and

D2: Cole, L.: "The Dastardly 'favicon.ico not found' Error", 3 August 1999, retrieved by the EPO on 11 October 2000 from <http://www.wdvl.com/Authoring/Design/Images/Favicon/icon.html>.

The Examining Division decided that the subject-matter of claim 1 of the then main request and auxiliary requests 1 and 2 lacked inventive step in view of document D2.

III. With the statement of grounds of appeal, the appellant filed an amended main request and auxiliary requests 1 and 2. It also filed the following two undated documents:

D3: "Favicon", Wikipedia; and

D4: screenshot of Internet Explorer.

IV. In a communication accompanying a summons to oral proceedings, the Board introduced the following documents into the proceedings:

D5: "Favicon", Wikipedia, 13 May 2004;

D6: US 5 963 964, 5 October 1999; and

D7: Kaasten S. et al.: "Designing an Integrated Bookmark / History System for Web Browsing",

Proceedings of the Western Computer Graphics  
Symposium 2000, March 2000.

It *inter alia* expressed the preliminary view that the subject-matter of claim 1 of all requests lacked inventive step over document D6, which appeared to be more pertinent than the prior art cited by the Examining Division.

- V. In its written submissions in preparation for the oral proceedings, the appellant filed a main request and auxiliary requests 1 to 3 replacing the requests on file.
- VI. Oral proceedings were held on 12 September 2017. At the end of the oral proceedings, the chairman pronounced the Board's decision.
- VII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request or, in the alternative, on the basis of the claims of one of auxiliary requests 1 to 3.
- VIII. Claim 1 of the main request reads as follows:

"A computer-implemented method of displaying a list of favorites on a display screen of a mobile communication device, the method comprising:

registering (S120), by a control unit (10) of the mobile communication device, a web page that has been accessed in the list of favorites;

storing (S130), by the control unit (10), an image of the web page that has been accessed as a thumbnail image (450, 510, 610, 710, 810, 910, 920) in a memory (30) of the mobile communication device, the thumbnail

image representing the real appearance acquired from a content of the web page (410, 616, 636, 720, 820);

displaying (S170), by a display unit (50) of the mobile communication device, a plurality of thumbnail images respectively corresponding to a plurality of web pages registered in the list of favorites on the display screen when the list of favorites is called;

updating, by the control unit (10), a selected thumbnail image stored in the mobile communication device; and

accessing (S180), by the control unit (10), a web page corresponding to the selected one of the plurality of thumbnail images and displaying, by the display unit (50), content of the accessed web page on the display screen;

wherein updating the selected thumbnail image comprises comparing an image of the accessed web page with the selected thumbnail image and updating the selected thumbnail image with the image of the web page that has been accessed if the selected thumbnail image is different from the image of the web page that has been accessed."

IX. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that some of the reference signs have been removed from the "storing" step, which now reads as follows:

"storing (S130), by the control unit (10), an image of the web page that has been accessed as a thumbnail image (910, 920) in a memory (30) of the mobile communication device, the thumbnail image representing the real appearance acquired from the content of the web page;"

In addition, the "updating" step reads as follows:

"updating, by the control unit (10), a selected thumbnail image stored in the mobile communication device periodically by accessing a website after a preset period of time ( $\Delta t$ ) since the thumbnail image has been registered;"

- X. Claim 1 of auxiliary request 2 differs from claim 1 of the main request in that the "updating" step reads as follows:

"updating, by the control unit (10), a selected thumbnail image stored in the mobile communication device in response to a user command, the displayed thumbnail images being updated by acquiring and storing an image from current content of the web page;"

In addition, the following text has been added at the end of the claim:

"; and  
registering lower page information regarding one or more lower pages (672, 674) of the web page that has been accessed and images of the lower pages, wherein the lower pages comprise at least one of a web page that has been registered through user settings, a web page that has been accessed more than one time, and a web page that has been accessed more than a predefined number of times."

- XI. Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that the "updating" step reads as follows:

"updating (S320, S330, S340), by the control unit (10), a selected thumbnail image stored in the mobile

communication device in response to a user command, the displayed thumbnail images being updated by:

- automatically storing (S330), by the control unit (10), an image of the updated web page as a new thumbnail image of the updated web page, and
- updating (S340) an existing thumbnail image of the updated web page with the image of the updated web page (S340);"

In addition, the following text has been added at the end of the claim:

"wherein displaying the selected thumbnail image comprises one or more lower pages of a web page corresponding to the selected thumbnail image as a slideshow (670, 672, 674), and

wherein the displaying as a slideshow, comprises displaying an identifier (U, D) for identifying thumbnail images in the selected thumbnail image and an identifier for identifying lower pages in the lower pages of the web page corresponding to the selected thumbnail image, respectively."

XII. The appellant's arguments as relevant to this decision are discussed in detail below.

### **Reasons for the Decision**

1. The appeal complies with the provisions referred to in Rule 101 EPC and is therefore admissible.
2. *The invention*
  - 2.1 The application relates to a mobile communication device comprising web-browsing functionality. The



background section discusses well-known bookmarking or "favorites" functionality, which allows users to register web pages by URL address in a list of favorites from which the web pages can later be accessed. Usually, the list of favorites is displayed as a list of URL addresses or web-page names. These addresses and names may be long and require scrolling, and it may be difficult to readily detect a web page of interest.

2.2 The invention essentially proposes displaying the list of favorites in the form of thumbnail images, each thumbnail image representing the "real appearance" of the corresponding registered web page. Upon selection of a thumbnail, the corresponding web page is accessed and displayed, and the stored thumbnail for the web page is updated if the content of the web page has changed.

3. *Main request - inventive step*

3.1 Document D6 relates to "visual bookmarks", which are reduced graphical images, i.e. thumbnails, of web pages and are associated with URLs to those web pages (see abstract). It describes a user computer running a browser implementing the bookmarking mechanism shown in Figures 14 to 17 (column 5, lines 26 to 34; column 6, line 16, to column 8, line 22).

3.2 Figure 14 depicts the process of creating a visual bookmark. In this process, a bookmark image for the currently displayed web page is created by taking a screen dump of the visual appearance of the current web page and graphically reducing the screen dump in size (column 6, lines 19 to 40). The image is stored in association with the web page's title and URL

(column 6, lines 41 to 48). That the stored visual bookmark is thereby registered in a list of bookmarks (or "favorites") is apparent from Figure 15, which illustrates a process of displaying the list of stored visual bookmarks upon user request (column 6, line 49, to column 7, line 18). Upon selection of a displayed bookmark image by the user, the corresponding web page is accessed, retrieved and displayed to the user (Figure 16; column 7, lines 29 to 36).

- 3.3 Document D6 further discloses, in Figure 17, a process of periodically updating the bookmark images. In accordance with a preference setting, if the user computer is experiencing low load, it downloads web pages that have not been retrieved within the last 24 hours and takes reduced screen dumps to create updated bookmark images replacing the previous images (column 7, line 37, to column 8, line 23).
- 3.4 The subject-matter of claim 1 of the main request hence differs from what is disclosed in document D6 in the following features:
- (a) the user computer is a "mobile communication device";
  - (b) a bookmark/thumbnail image is updated when the user selects it to access the associated web page; and
  - (c) updating of a selected image involves "comparing an image of the accessed web page with the selected thumbnail image and updating the selected thumbnail image with the image of the web page that has been accessed if the selected thumbnail image is different from the image of the web page that has been accessed".

3.5 The appellant submitted that these three differences could not be treated separately in the assessment of inventive step because, in the context of a mobile terminal as specified in feature (a), which typically had a narrow and possibly unstable network connection, features (b) and (c) interacted to "render web page navigation more efficient" by providing the user with an updated thumbnail only for the selected "thumbnail of interest" and only if the content of the thumbnail had actually changed.

3.6 The Board cannot recognise any particular interaction between feature (c) and features (a) and (b).

According to feature (c), a selected stored thumbnail image is updated, i.e. overwritten with a new image, if "an image of the accessed web page" differs from the stored thumbnail image for the web page. Whether the two images are different is determined by comparing them. Hence, to determine if the selected stored thumbnail image is to be updated/overwritten, first a thumbnail image of the web page as it is currently stored on the server has to be obtained. Then this image is compared with the stored image.

The application as filed provides no further details of this process. At the oral proceedings, the appellant suggested that the comparison could be carried out, for example, by comparing the creation date of the web page just accessed and retrieved with the creation date of the web page corresponding to the currently stored thumbnail image. But there is no such disclosure in the application as filed, and the Board cannot ignore that the wording of feature (c) also covers a pixel-by-pixel comparison of the two images or a byte-by-byte comparison of the corresponding image data. In this

reading, the only action saved by feature (c) is the actual overwriting of the currently stored thumbnail image with the thumbnail image created from the more recently downloaded web-page information - albeit at the computational cost of the image comparison. In particular, no network bandwidth is saved: the web page still has to be retrieved from the server.

3.7 In the absence of a technical interaction between feature (c) and the other two distinguishing features, it can be treated separately. In the Board's view, it represents an obvious implementation detail having no surprising technical effect: there is no need to overwrite a file with a new version of the file if the file has not changed.

3.8 As to the alleged synergistic interaction between features (a) and (b), the Board notes that the application as filed is completely silent on bandwidth issues or the (in)stability of the mobile communication device's network connection. It does not specifically state that the device is a smartphone or other form of mobile telephone, and it does not rule out that the device is connected to the internet via a relatively stable and high-bandwidth WLAN. No suggestion is made that feature (b) is specifically advantageous in the context defined by feature (a).

In any event, the Board considers that the skilled person dealing with web browsing or other networking applications will normally have bandwidth and network-stability issues in mind, even if he does not specifically consider the use of a mobile communication network. Indeed, document D6 explicitly considers network performance where it defines a "period of low load" as having, in particular, low network utilisation

(column 7, lines 56 to 64). The Board therefore cannot recognise any surprising technical effect arising from the combination of features (a) and (b). The two features may therefore be treated separately.

- 3.9 It is undisputed that mobile communication devices incorporating web-browsing functionality were well known at the priority date of the application, even if the term "mobile communication device" is interpreted restrictively as excluding portable computers such as laptops. It was therefore obvious to implement the web-browsing functionality of document D6 on such a device, in accordance with feature (a).

In this context, the appellant argued that the author of document D6 - a patent application filed in 1996 - had not had smartphones in mind when drafting the application. But this argument cannot help the appellant, as inventive step is to be assessed at the priority date of the claimed invention.

- 3.10 As for feature (b), the appellant submitted that it was "the very purpose" of document D6 to update a thumbnail image in an "idling phase", i.e. when no user input had been made and the CPU/network utilisation was beneath a certain level. Since the idea of updating a thumbnail image when it was selected by the user went contrary to that purpose, the skilled person would not have had any reason to consider such a modification.

However, document D6 merely states that its method "preferably" checks if the computer on which the browser is running is currently experiencing a period of low load (column 7, lines 50 to 54). This expressed preference for performing a background task during a low-load period is understandable from a technical

point of view, but it is not a reason for the skilled person to reject the possibility of carrying out an update process at another point in time; in fact, it rather suggests to the skilled person that such other possibilities exist. Hence, the Board cannot agree that feature (b) goes against the teaching of document D6.

3.11 In document D6, to update the thumbnail image of a bookmarked web page, it is necessary to retrieve the most recent web-page information from the web server. When the user selects a bookmarked web page for display, this information is also retrieved from the server. Updating the thumbnail image when its web page is selected by the user thus has the advantage that the required web-page information need not be retrieved separately, and it can thus be said to save network and computational resources. The Board is convinced, however, that the skilled person, starting from document D6 and looking for a way to efficiently implement the updating process, would both realise that a thumbnail image may be updated when the required information is available, i.e. when the user has selected the bookmarked web page and the web page has been retrieved from the web server for display, and immediately recognise the above-mentioned efficiency advantages.

3.12 The appellant argued that updating only thumbnail images selected by the user had the advantage that no resources were used for updating thumbnail images that were never selected. In document D6, all thumbnail images were periodically updated.

The Board notes that the claim does not say "only", i.e. it does not rule out that thumbnail images are updated even if they are not selected. But even if it

did, the decision to update only the images selected by the user would be the obvious consequence of the non-technical decision on what thumbnail images to display to the user in the list of favorites: images of the current appearance of the bookmarked pages or images of the bookmarked pages as they were last displayed to the user. That not updating certain images saves the resources that would otherwise have been spent on updating them is then merely an expected effect which cannot support an inventive step.

3.13 Hence, feature (b) is also obvious. The Board therefore concludes that the subject-matter of claim 1 of the main request lacks inventive step (Article 56 EPC).

4. *Auxiliary request 1 - added subject-matter*

4.1 Claim 1 of auxiliary request 1 adds to claim 1 of the main request a feature specifying that the selected thumbnail image is updated "periodically by accessing a website after a preset period of time ( $\Delta t$ ) since the thumbnail image has been registered".

4.2 Periodically updating thumbnail images is disclosed in the application as filed only on page 11, lines 16 to 21 (referring to "a predetermined amount of time after the registration of a web page"), and in dependent claim 5. Neither passage relates to the periodic updating of "a selected thumbnail image", i.e. of the thumbnail image selected by the user, as specified in claim 1.

4.3 Hence, the subject-matter of claim 1 of auxiliary request 1 extends beyond the content of the application as filed, contrary to Article 123(2) EPC.

5. *Auxiliary request 2 - inventive step*

5.1 Claim 1 of auxiliary request 2 adds to claim 1 of the main request a feature specifying that updating of a selected thumbnail image takes place "in response to a user command, wherein the displayed thumbnail images are updated by acquiring and storing an image from a current content of the web page".

In addition, claim 1 of auxiliary request 2 adds the features "registering lower page information regarding one or more lower pages of the web page that has been accessed and images of the lower pages, wherein the lower pages comprise at least one of a web page that has been registered through user settings, a web page that has been accessed more than one time, and a web page that has been accessed more than a predefined number of times".

5.2 As to the first added feature, the claim does not explain what "user command" is meant. It can be understood from the description on page 7, lines 19 to 24, and page 11, lines 10 to 13, that this user command may be a command to reload the web page being displayed. For essentially the same reasons as given in point 3.11 above, the Board considers that it was obvious to update a stored thumbnail image if its web page is reloaded.

5.3 As to the features relating to "lower pages", it can be understood from the discussion on page 9, line 17, to page 10, line 15, of the description, that "lower pages" of a bookmarked web page are web pages that can be reached from the bookmarked web page by following hyperlinks. The method of claim 1 "registers" information and thumbnail images of at least some of



these "lower pages", in particular those that have been "registered through user settings", "accessed more than one time" or "accessed more than a predefined number of times".

The purpose of this registration is not mentioned in claim 1 but is explained in the description on page 10, lines 3 to 15, and shown in Figure 9: upon "selection" of a thumbnail image in a menu of thumbnail images, for example by mousing over the image (cf. page 9, lines 9 to 16), the displayed thumbnail image is replaced with a slide-show animation cycling through the thumbnail images of the "lower pages". Although claim 1 does not state this purpose, claim 1 of auxiliary request 3 does, and so the Board finds it convenient to take it into account also for auxiliary request 2.

5.4 The display of a slide-show animation of thumbnail images of related pages when selecting/mousing over a thumbnail image may help the user in mentally evaluating the relevance of the selected thumbnail image, but it is established case law that lowering the cognitive burden of the user is in general not a technical effect (see e.g. decision T 1834/10 of 25 February 2015, reasons 5). Since the Board does not see any other plausible effect of the slide show, and the appellant has not alleged any, it considers that the slide show of thumbnail images of "lower pages" that have been registered through user settings or have been accessed more than once or more than a predefined number of times is a non-technical presentation of information. The display of the slide show therefore does not contribute to inventive step.

5.5 The skilled person, faced with the problem of implementing this presentation of information, would

effortlessly modify the web browser of document D6 to allow it to "register" the necessary "lower page information" and "images of the lower pages". He would thereby arrive at the claimed "lower page" features without the exercise of inventive activity.

5.6 Hence, the subject-matter of claim 1 of auxiliary request 2 lacks inventive step (Article 56 EPC).

6. *Auxiliary request 3 - inventive step*

6.1 The "updating" step in claim 1 of auxiliary request 3 has been reworded, but it still corresponds to the "updating" step in claim 1 of auxiliary request 2.

6.2 Compared to claim 1 of auxiliary request 2, claim 1 of auxiliary request 3 adds the features "wherein displaying the selected thumbnail image comprises one or more lower pages of a web page corresponding to the selected thumbnail image as a slideshow, and wherein the displaying as a slideshow, comprises displaying an identifier for identifying thumbnail images in the selected thumbnail image and an identifier for identifying lower pages in the lower pages of the web page corresponding to the selected thumbnail image, respectively".

The features specifying that a slide show is displayed for the selected/moused-over thumbnail image have already been taken into account in the reasoning given for auxiliary request 2. The addition of an "identifier" to the display to allow the user to distinguish the thumbnail image of the bookmarked page from thumbnail images of related "lower pages" is again a non-technical presentation of information, not contributing to inventive step.

6.3 Thus the subject-matter of claim 1 of auxiliary request 3 likewise lacks inventive step (Article 56 EPC).

7. *Conclusion*

Since none of the requests on file is allowable, the appeal is to be dismissed.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



I. Aperribay

R. Moufang

Decision electronically authenticated