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Datasheet for the decision of 12 September 2012

Case Number: T 0422/08 - 3.5.01

Application Number: 00402614.2

Publication Number: 1087319

IPC: G06F 17/60

Language of the proceedings: EN

Title of invention:
Information processing system, hand held cellular phone and information processing method

Applicant:
Sony Corporation

Headword:
Information reader / SONY

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step - no"

Decisions cited:
-

Catchword:
-

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Case Number: T 0422/08 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 12 September 2012

Appellant: (Applicant)
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Decision under appeal:
Decision of the Examining Division of the European Patent Office posted 28 August 2007 refusing European patent application No. 00402614.2 pursuant to Article 97(1) EPC 1973.

Composition of the Board:

Chairman: S. Wibergh
Members: K. Bumes
A. Pignatelli

Summary of facts and submissions

I. The appeal is against the decision of the examining division to refuse European patent application No. 00402614.2, entitled "*Information processing system, hand held cellular phone and information processing method*", for lack of inventive step (Articles 52(1) and 56 EPC 1973).

II. The examining division's decision, dated 28 August 2007, relied *inter alia* on the following prior art documents:

D1: WO-A-99/17 230,
D3: EP-A-0 645 728 and
D8: WO-A-97/36 269.

(a) The examining division's obviousness objection set out from D3. While the system of D3 provided information in the form of an optical bar code to be read by a bar code reader, claim 1 stipulated that the information was stored in an IC chip and obtained by electromagnetic interaction. The skilled person seeking to overcome the limitations of bar codes would look for a more efficient way to retrieve information in a contactless manner and would regard the use of electromagnetic interaction with IC chips as an enhanced alternative to the approach of document D3, electromagnetic data retrieval from IC chips being known from D8 (in particular page 2, lines 2 to 15, and page 5, lines 18 to 28). Applying this alternative to the system of D3 was not considered to require an inventive step.

(b) The auxiliary request then on file was considered to add a remote information processing feature for

outputting the information at a resolution higher than that available on the cellular telephone. However, outputting the information on a remote information processing unit allowing a higher resolution was considered a choice known from D3 (column 13, lines 16 to 20: *printer*) and obviously desirable once the stored amount of information exceeded the output capacity of the cellular telephone display.

III. The appellant requests that the decision under appeal be set aside and that a patent be granted on the basis of the Main Request (amended claims 1 to 9) filed on 7 August 2012 or the Auxiliary Request (amended claims 1 to 5) filed with the statement setting out the grounds of appeal (28 December 2007).

(a) Claim 1 according to the main request reads:

"1. A system (10) for processing information comprising:

a plurality of information providing medium [sic] (11) each attached to an object (2), each information providing medium comprising an IC chip (16) for storing information corresponding to the respective object (2), and a first antenna (17) connected to the IC chip;

a cellular telephone (401) comprising a second antenna (52) capable of electromagnetically interacting with the first antenna (17) to obtain the information when the cellular telephone (401) is brought in proximity with the information providing medium (11);

storage means (42, 43, 45) for storing the obtained information in the cellular telephone (401); and

an information processing unit (49) for reading

the obtained information in the cellular telephone (401)

characterized in that the cellular telephone (401) comprises an information processing unit (49, 44) for converting the obtained information into corresponding audible or visible information, and means (66) for outputting the corresponding audible or visible information, said means (66) for outputting the information comprising at least a visual display,

in that the obtained information is stored in said storage means (42, 43, 45) as update history information on lists, and in that the cellular telephone (401) comprises a command unit (65) for searching an information item on the lists."

(b) The auxiliary request appends one paragraph to the preamble of claim 1,

"means (13, 79, 81) for transmitting the stored information to additional devices,"

and two paragraphs to the characterising portion of claim 1:

"in that it further comprises an information processing unit (15), remote from the cellular telephone (401), having means for receiving the stored information from the cellular telephone (401), means for processing the received information into corresponding audible or visible information, and an additional means (6) for outputting the corresponding audible or visible information, and

in that the additional means (6) for outputting the corresponding audible or visible information has a higher resolution than the means (66) for outputting the corresponding audible or

visible information."

(c) With respect to the main request, the appellant's inventiveness argumentation sets out from document D1 on which the preamble of the amended claim 1 is said to be based. Accordingly, it is an object of the present invention to allow the user of a mobile phone to easily obtain information associated with an object (such as a commodity or advertising material) and to retrieve the information later without having to consult an external database.

The appellant argues that D1 fails to disclose at least the following features of claim 1 (numbering taken from page 5 of the statement of grounds of appeal):

(vi) the obtained information is stored in the storage means (42, 43, 45) as update history information on lists,

(vii) the cellular telephone (401) comprises a command unit (65) for searching an information item on the lists,

(viii) the cellular telephone (401) comprises an information processing unit (49, 44) for converting the obtained information into corresponding audible or visible information,

(ix) the cellular telephone (401) comprises means (66) for outputting the corresponding audible or visible information, said means (66) comprising at least a visual display.

(d) With respect to the auxiliary request, the appellant submits that the additional features are useful when the user has gathered a great amount of information

stored in the cellular telephone. The user may retrieve information stored in the cell phone and choose to display it on the cell phone or on the additional means such as a personal computer which is more suitable for displaying video data, for example. The combination of features is not taught by D1 or the other prior art documents, either taken alone or together.

IV. The Board summoned the appellant to oral proceedings scheduled for 12 September 2012 and annexed its preliminary analysis of the case. The Board's preliminary conclusion was that neither version of claim 1 (main request, auxiliary request) involved an inventive step over the message information system according to D1, which was regarded as the closest prior art document.

V. In preparation for the oral proceedings, the appellant filed a clean copy of the claim set according to the main request (reproducing a working copy filed with the statement of grounds of appeal) and presented additional arguments. As the time lag between D1 and the present application was only two years, the improved functionality and user-friendliness achieved by the invention could not be explained by the usual evolution of hardware technology but required an inventive step.

VI. At the oral proceedings, the appellant emphasised that the claimed combination of features added a useful function to cellular phones even though each element of the claimed system might be conventional on its own. The invention simplified the approach known from D1: rather than requesting information from an external

server or database, the cell phone of the present application made object-related information immediately available to the user of the phone in a variety of everyday situations (in the street, on a train, in a museum etc). That improvement was achieved by minimal modifications to the phone and to the objects interacting with it. Instead of receiving a mere object identifier as a pointer into an external database (as according to D1), the cell phone of the present application was arranged to receive more comprehensive information directly from the object and for immediate display to the interested user. The optimisation and simplification concerned a large number of users; even unskilled users were able to gather data by bringing the cell phone antenna into an object's proximity rather than pointing an optical reader at a barcode. The considerable advantages achieved by simple means indicated an inventive step. The skilled person *could* certainly implement the approach of the present invention but it was not obvious why he *would* do so.

While D1 presented barcodes and transponders as equivalent carriers of object information, the information was explicitly limited to an object identifier for interaction with an external database. D1 portrayed a self-contained, workable system. Hence, if a skilled person transferred the technology of D1 to a different context (such as the barcode-reading telephone of D3), he would again design the transponder information only as an object identifier. Thus, D1 taught away from the invention.

The additional features of claim 1 according to the auxiliary request provided the cell phone with

additional functionality by means of minimal modifications. The phone could be used both autonomously and with a personal computer so that the user was in a position to choose where and how to display the received information. In the prior art (e.g. D3), displaying information on a larger scale was not necessary and, thus, such a choice was not motivated.

Reasons for the decision

1. The application claiming a Japanese priority of 22 September 1999 was published as

A2: EP-A2-1 087 319 (28 March 2001).

The following problem is set out in A2, paragraph 0004:

"[...] where one sees an advertising material of interest at [a] station concourse on the way of commutation, it is generally often that one must write the information such as address or contact associated with that advertising material by using pen or pencil, and such writing is very cumbersome."

The following solution is proposed (A2, paragraph 0006):

"It is an object of the present invention to provide an information processing system, a hand held cellular phone, and an information processing method for, in the case where an information user attempts to obtain information associated with an entity such as commodities or advertising materials, making it possible to electrically record the information instantaneously and then, making it possible to process the information."

In particular, a hand-held cellular phone is proposed for reading and recording information from an entity such as an advertisement (A2, paragraph 0010). The phone may comprise an antenna to be coupled electromagnetically with an information providing medium (A2, paragraph 0011). Alternatively, the

cellular phone may be provided with an optical reader to read barcodes (A2, Figure 21; paragraphs 0007/0008, 0026/0028, and 0188 to 0200). The recorded information may be immediately outputted on a display of the cell phone (A2, paragraph 0234).

Main Request

2. *Article 123(2) EPC - Amendments*

The Board is satisfied that the system according to amended claim 1 is based on the original disclosure.

3. *Article 54(1)(2) EPC 1973 - Novelty*

The appellant has delimited claim 1 with respect to the message information system of D1, which the Board takes to be the closest prior art document.

3.1 D1 discloses an information system in which a mobile phone (reference numeral 2 in Figures 1 and 3) is used to receive an identifier (ID1, ID2) from an object (1). As many users always carry a mobile phone, an add-on function of the phone allows the users to use the message information system of D1 without carrying additional devices (D1, page 4, lines 24 to 29).

The object to be identified may comprise a transponder or RFID (radio frequency identification) device (which implies an antenna); accordingly, the receiving means of the mobile phone receives the identifier in the form of electromagnetic waves (D1, page 5, last paragraph). This embodiment has the advantage that the object does not need to be within reach of the user (D1, page 6,

paragraph 1). Alternatively, the identifier may be read optically as a barcode which is easy to realise (D1, page 6, paragraphs 2 and 3; claim 8).

When the object identifier has been received by the mobile phone, it is stored therein at least temporarily (D1, page 6, lines 23 to 26) and converted to a request message which is sent to a central database (D1, page 10, line 7 to page 11, line 9).

The database sends the requested object information (e.g. several pages of text and images, see D1, page 19, lines 11 to 13) to an address selected by the user (D1, e.g. claims 1 and 5). D1 considers the information receiving capability of the mobile phone to be limited (page 8, lines 1/2) and, therefore, prefers the object-related information to be directed to a device other than the mobile phone (page 7, lines 33 to 36), e.g. to the user's mailbox (page 3, lines 12 to 16) or to his home or office computer (page 7, lines 16 to 21).

Alternatively, when the object-related information is needed immediately, the user can direct it to the address of the mobile phone itself (D1, page 7, lines 30 to 33). This feature implies that the object-related information is stored in the mobile phone at least temporarily and outputted on the mobile phone using its ordinary graphic and/or acoustic user interface (D1, Figure 3, display 35; pages 20/21).

3.2 D1 does not disclose that the object identifier, once received and stored in the cell phone, is displayed on the phone. In relation to its Figure 3, D1 (pages 20/21) describes a mobile phone and its operation to build the

request for object-related information once the object identifier has been gathered; that operation comprises a user interaction based on a displayed menu which, however, does not include the obtained object identifier. Hence, the feature in claim 1 that the cellular phone converts "*the obtained information*" into corresponding audible or visible information is new over D1.

Nor does D1 disclose that information stored on the mobile phone can be updated and searched. It follows that the second characterizing feature, stating that the obtained information is stored in said storage means as update history information on lists, and that the cellular telephone comprises a command unit for searching an information item on the lists, is also new with respect to D1.

3.3 Therefore, the invention is new.

4. *Article 56 EPC 1973 - Inventive step*

4.1 The appellant first argues that the claimed system involves an inventive step since D1 does not disclose all of its features in combination, this particular combination providing significant advantages to the users of cell phones without burdening cell phone manufacturers.

The Board disagrees with that argument, for the following reasons.

It is true that D1 does not anticipate a cell phone which both obtains object information via an antenna

and displays the obtained information directly on the phone. However, said document does describe the skilled person's knowledge, tools, approaches and underlying goals in the field of automatic information gathering. It is clear from D1 that electromagnetic antennas are more user-friendly than optical readers but more difficult (and expensive) to realise. It is also clear (D1, page 4, lines 24 to 29; Figure 3) that mobile phones are preferably enhanced with add-on features such as antennas or optical readers.

D1 states explicitly (page 7, line 33 to page 8, line 2) that the information processing and storing capability of the cell phone determines its data receiving capability. Therefore, large amounts of object information should be collected from an external (central) database if the data gathering capacity of the cell phone is limited.

However, the skilled reader of D1 understands that accessing an external database also has drawbacks: it is time-consuming and depends on the availability of networks and databases. If only a small amount of object information, such as the object name or identifier, is sufficient for the user, there is obviously no need to consult an external database. The insight that a relatively small amount of information about an object might in certain situations be sufficient is not of a technical nature and thus cannot as such involve an inventive contribution.

Therefore, the feature of directly receiving, processing and displaying the object information solves the technical problem of adapting the known device to a

situation where a small amount of information (such as a name or a number) is to be presented to a user. A simplification consisting in omitting the external database is in the Board's view a straightforward design choice readily occurring to the skilled person regardless of whether the information is received through light or radio frequency radiation.

The appellant has argued that this modification was not obvious since the external database was an important feature in D1. In the Board's view, however, the skilled person would not be distracted by the external database feature of D1 to such an extent that he would stick to an external database even in circumstances where there was no need for it. Being skilled in the art, he would consider the external database in relation to its purpose (handling of large data amounts) and would recognize its manifest drawbacks (long response time, dependence on networks and databases). It is obvious that a local solution (i.e. direct display of obtained object information on the cell phone) has other advantages and drawbacks (short response times *versus* small data amounts). It is up to the skilled person to choose among those obvious compromises having regard to the amount of information to be conveyed in a given situation.

4.2 The second characterising feature of claim 1 states that information is stored in the storage means as update history information on lists, and that the cellular telephone comprises a command unit for searching information item on the lists. This feature provides the following effect: As a history of the obtained object-related items of information is listed

in the memory of the cellular phone, the stored items can be retrieved by searching the phone memory. In particular, it is not necessary to download object-related information again if information on a specific object has been downloaded before. (See A2, paragraph 0235: "*past information remains as update history information on lists*".) Thus the feature solves a second technical problem, independent of the first one, consisting in providing a way of searching the stored information.

It is obvious that a history of object information builds up in the memory of a cell phone over time when the phone is used and re-used for obtaining information on successive objects of interest. Users wish to keep a maximum of pertinent information. Thus, the need for searching this mass of information would be apparent to any user.

As to the claimed solution to this problem, it is clear that, as more and more data is stored, it becomes necessary to structure the storage, e.g. in the form of (chronological) lists. Moreover, some means for searching the lists would have to be provided. They could arbitrarily be referred to as "command means".

4.3 The Board concludes that claim 1 does not involve an inventive step (Article 56 EPC 1973).

Auxiliary Request

5. Claim 1 according to the auxiliary request incorporates the feature that the cellular phone cooperates with a remote information processing unit comprising

additional means for outputting (in particular) visible information, these additional means having a higher resolution than the means for outputting information on the cellular phone. See paragraph 0077 of A2: "*One can read the advertising information D01 from the information reading display 12 to the personal computer 15 at home, can see the advertising information D01 associated with the poster 20 on the display of the personal computer 15 [...]*".

6. *Article 56 EPC 1973 - Inventive step*

Downloading data from a cellular phone to a personal computer is a notorious way of handling the data of a portable device, which has limited memory capacity, in order to backup the data and/or to release memory capacity of the portable device. The USB (Universal Serial Bus) terminal used for that purpose (A2, paragraphs 0058 and 0073; Figure 3, reference numeral 13) is a pre-existing interface standard *inter alia* for that purpose. Since a PC screen normally has a higher resolution than the display of a hand-held cellular phone, this feature is merely the inevitable result of transferring the stored data to a PC.

6.1 The Board concludes that claim 1 of the auxiliary request does not involve an inventive step, either.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek S. Wibergh