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**Datasheet for the decision
of 23 September 2011**

Case Number: T 1424/07 - 3.5.01
Application Number: 02752900.7
Publication Number: 1410264
IPC: G06F 17/30, H04L 29/06
Language of the proceedings: EN

Title of invention:

System and method for providing remote data access and transcoding for a mobile communication device

Applicant:

RESEARCH IN MOTION LIMITED

Opponent:

-

Headword:

Transcoding system/RIM

Relevant legal provisions (EPC 1973):

EPC Art. 56, 83

Keyword:

"Inventive step - no (main and auxiliary requests I and II)"
"Remittal to the examining division (auxiliary request III)"

Decisions cited:

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Catchword:

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Case Number: T 1424/07 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 23 September 2011

Appellant: RESEARCH IN MOTION LIMITED
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 8 March 2007
refusing European patent application
No. 02752900.7 pursuant to Article 97(1) EPC
1973.

Composition of the Board:

Chairman: S. Wibergh
Members: R. R. K. Zimmermann
G. Weiss

Summary of Facts and Submissions

- I. European patent application number 02752900.7 published as international publication number WO 03/007183 claimed multiple priorities, the earliest priority date from July 2001, for a system and method for providing remote data access and transcoding for a mobile communication device.
- II. By a decision announced in oral proceedings and issued in writing by letter dated 8 March 2007, the examining division refused the application essentially for lack of inventive step, citing among others the following prior art document:
- D8: GB 2356535A (published in May 2001).
- The refusal was based on the main request and auxiliary request III filed in oral proceedings before the examining division on 21 February 2007, and auxiliary requests I and II filed on 18 January 2007 and 12 February 2007, respectively.
- III. The appellant (applicant) lodged an appeal against the decision together with amended independent claims 1 and 26 as auxiliary request IV on 16 May 2007 and paid the appeal fee on the same day. The statement of grounds of appeal was filed together with a request for amendment of claim 26 of auxiliary request I on 18 July 2007.
- IV. Following an unfavourable provisional opinion issued by the Board, to which the appellant duly replied, oral proceedings before the Board took place on 23 September 2011. At the oral proceedings the appellant replaced all previous requests with amended main and first to

third auxiliary requests. Claim 1 of each of these requests read as follows:

Main request

"1. A system for providing information content received from an information source (20) over a wireless network (14) to a wireless mobile communication device (12), comprising:

a transcoding system (28, 86) comprising a plurality of transcoders (74, 82, 96, 104), each transcoder (74, 82, 96, 104) operable to transcode information content from a respective input content type into a respective output content type; ¹<wherein the output content type is formatted appropriately for transmission over the wireless network (14) and for the wireless mobile communication device (12);> and

a network device ²<> in communication with the transcoding system (28, 86), the network device comprising a connection handler system providing a plurality of connection handlers (24, 26, 94) for handling and processing content from the information source (20), wherein each connection handler (24, 26, 94) is configured to forward content back and forward and to translate between a communication protocol used for the communication with the information source (20) and a communication protocol used for the communication with the wireless mobile communication device (12);

³<>

the network device being operable to receive, from the mobile communication device (12), a connection request in the communication protocol used for the communication with the wireless mobile communication device (12) comprising ⁴<a transcoder request specifying

a particular transcoder (74, 82, 96, 104) and a reference to a connection handler name,> the network device being further operable to select a connection handler (24, 26, 94) based on the reference to a connection handler name received with the connection request; the plurality of connection handlers (24, 26, 94) being operable to communicate with the information source (20) based on different internet communication protocols which are different from the communication protocol used for the communication with the wireless mobile communication device (12); wherein the communication protocol used for the communication with the wireless mobile communication device (12) reduces the amount of traffic sent over the wireless network (14) compared to the internet communication protocols; ⁵<the selected connection handler (24, 26, 94) being operable to select the particular transcoder (74, 82, 96, 104) from the plurality of transcoders (74, 82, 96, 104) as specified in the transcoder request; the selected connection handler (24, 26, 94) being further operable to establish a connection with the information source (20) using its associated communication protocol and to send an information request to the information source (20) for receiving information content of the input content type of the selected particular transcoder (74, 82, 96, 104); the selected particular transcoder (74, 82, 96, 104) being operable to transcode the received information content of its input content type to generate transcoded information content of the output content type of the selected particular transcoder (74, 82, 96, 104);> and

the selected connection handler (24, 26, 94) being further operable to send the transcoded information content ⁶<of the output content type of the selected particular transcoder (74, 82, 96, 104)> to the ⁷<mobile communication device (12)."

Numbered angle brackets ¹<>, ²<> etc. are added for convenience to indicate passages where the wording of claim 1 of the auxiliary requests differs from claim 1 of the main request. The passages amended according to the auxiliary requests are as follows:

In auxiliary request I

¹<> reads: "wherein the output content type is formatted appropriately for transmission over the wireless network (14) and for the wireless mobile communication device (12); wherein the respective output content type includes compiled WML (WMLC);",
⁷<> reads: "wireless".

In auxiliary request II

¹<> is deleted,
⁴<> reads: "a reference to a connection handler name, wherein the connection request identifies one or more content types accepted by the wireless mobile communication device (12); wherein the accepted content types are formatted appropriately for transmission over the wireless network (14) and the wireless mobile communication device (12);",
⁵<> reads: "the selected connection handler (24, 26, 94) being operable to establish a connection with the information source (20) using its associated communication protocol and to send an information

request to the information source (20) for receiving information content; the selected connection handler (24, 26, 94) being operable to map the plurality of transcoders (74, 96) to create a plurality of transcoding chains, each transcoding chain associating more than one transcoders (74, 96) to transcode a respective input content type into a respective output content type; to determine a the received content type of the information content; to search the transcoding chains for a respective input content type matching the received content type and a respective output content type matching one of the one or more accepted content types; and to select a transcoding chain to transcode the information content; the selected transcoder chain being operable to transcode the received information content of the received content type to generate transcoded information content of the output content type of the selected transcoder chain;" ,

⁶<> is deleted,

⁷<> reads: "wireless".

In auxiliary request III

²<> reads: "(124)",

³<> reads: "the network device (124) being configured within a private network (130) and behind a security firewall (127) for communicating with the wireless mobile communication device (12) through a network server (122) that is also configured within the private network (130) and behind the security firewall (127);

the network server (122) enabling secure communication to the wireless mobile communication device (12) by encrypting communications directed to the wireless mobile communication device (12) and decrypting communications from the wireless mobile communication device (12);",

⁶<> reads: of the output content type of the selected particular transcoder (74, 82, 96, 104) to the network server (122) for encryption and transmission",

⁷<> reads: "wireless".

- V. The appellant has requested that the decision under appeal be set aside and a patent be granted on the basis of one of the sets of claims submitted at the oral proceedings as new main request and auxiliary requests I to III.

- VI. According to the appellant, the invention claimed was patentable.
 - (a) Claim 1 of the main request was related to a proxy system for providing content from an information source essentially via Internet and over a wireless network to a wireless mobile communication device, the proxy system comprising a plurality of connection handlers and a plurality of transcoders. The connection handlers provided for protocol conversion from and to a proprietary protocol used between the wireless mobile device and the proxy system and an Internet protocol like HTTP, FTP etc used by the information sources on the Internet side of the proxy system.

The plurality of transcoders, on the other hand, provided for a conversion of the content format from

one type to another, for example from HTML or XML to WMLC. The wireless mobile device had full control over the format and protocol conversions. Through the invention, the mobile device was able to specify the content types and protocol types to be used by the proxy system to send information to and receive information from an Internet information source. To communicate with the proxy system through a wireless network, the mobile device could use a standard protocol like the HTTP but also other protocols like the proprietary protocol called IP Proxy Protocol or IPPP developed by the appellant.

Prior art document D8, although disclosing some features of the present invention, was only about translation between different content formats. Protocol transcoding was only touched on in passing and only in the context of converting various protocols to HTTP. A wireless mobile device would not be able to select a handler for transcoding an HTTP response to the proprietary IP Proxy Protocol, for example.

- (b) The auxiliary requests represented an effort to overcome the objections raised in the preliminary opinion of the Board.

Auxiliary request I specified that the output content type included compiled WML (WMLC). The term "content type" as used in the present application referred to a type of "mark up language" used for describing the content of an Internet web page. WMLC was a particularly suitable format, and not mentioned in D8. Auxiliary request II specified the formation of transcoder chains. Document D8 disclosed a kind of intermediate format conversion, but it did not

anticipate the inventive concept of managing such conversions by creating virtual chains of transcoders for matching input and output formats in a flexible and efficient manner.

Auxiliary request III, finally, was specifically concerned with a security related issue, namely how to provide information content from a variety of Internet sources to a wireless mobile device efficiently and securely. This aim was achieved by arranging the proxy system in a private network behind a firewall and by encrypting and decrypting the information content transmitted between the proxy and the wireless mobile device. Such a configuration was neither common practice nor was it derivable from the prior art cited in the search and examination procedure.

Reasons for the Decision

1. The appeal is admissible and partly successful: The main request and auxiliary requests I and II do not comply with the requirement of inventive step as specified in Article 56 EPC 1973 and can thus not be allowed. Auxiliary request III, however, can be allowed in so far as the decision under appeal has to be reversed and the case remitted to the examining division for further prosecution.

Main request

2. The main request already fails on claim 1. Before turning to the merits of this claim, however, closer consideration should be given to some problematic wordings of the claim requiring interpretation.

2.1 Claim 1 defines a system for providing information content received from an information source over a wireless network to a wireless mobile communication device, the system comprising a transcoding system comprising a plurality of transcoders and a network device in communication with the transcoding system, the network device comprising a connection handler system providing a plurality of connection handlers, the network device being operable to receive, from the mobile communication device, a connection request in a communication protocol used for the communication with the wireless mobile communication device comprising a transcoder request specifying a particular transcoder and a reference to a connection handler name, and the network device being further operable to select a connection handler. The remaining parts of claim 1 concern functional features of the transcoders and the connection handlers.

2.2 The term "network device" appears also in the introductory part of the description and in the original claims (cf WO-publication, page 3, line 6 ff. and page 56, claim 1 ff.), however, in the context of a general summary of the invention rather than in relation to a specific element or component of the invention. The only system component described in some detail and matching the definition of the network device is a proxy server, designated as "IP proxy system" or "IP proxy" (cf 18 in fig. 1; 84 in fig. 8; 124 in fig. 11).

In all embodiments of the invention, the proxy server does not communicate directly with a wireless mobile device, but only via gateway 15. As follows clearly

from page 2, line 6 ff. and page 49, line 16 ff. of the application, the gateway is or at least could be a common WAP gateway. This means that the IP proxy server (i.e. the network device in terms of the claims) does not use any wireless network protocol, but rather a communication protocol appropriate to communicate with the gateway 15, which could be a plain standard Internet protocol like HTTP or TCP (cf page 6, line 6 ff.).

Indeed, the only communication protocols specifically disclosed in the application are such standard Internet protocols (cf e.g. page 5, line 11 f.) and the proprietary protocol "IP Proxy Protocol" ("IPPP") developed by the appellant (cf page 10, line 3 ff.).

- 2.3 The appellant heavily relied on the IP Proxy Protocol in its submissions. However, as far as the Board is aware, this protocol has not been published before the priority date of the present application. Neither is the protocol definition disclosed in the present application, nor at the general disposal of the skilled person for other reasons. An invention or embodiments of an invention based on such an undisclosed standard or protocol cannot be considered to meet the requirement of sufficient disclosure as set out in Article 83 EPC 1973.

Consequently, an embodiment including the IP Proxy Protocol cannot be validly claimed and cannot be drawn on as an argument in support of patentability of the invention.

- 2.4 It follows that a network device in terms of claim 1 should be understood as a proxy server using the normal Internet protocol suite for communication with the

wireless mobile device (via the gateway 15) as well as with other Internet sources. Embodiments using the IP Proxy Protocol cannot be taken into account in assessing the invention.

2.5 Furthermore, the expression "connection handler system" requires attention. This term does neither correspond to any element or component of the invention described nor does it convey any clear technical teaching or other meaningful information. The Board considers this definition an empty formula, which should be given no weight in the further assessment of the invention.

2.6 There is no sharp distinction between transcoder and connection handler, both process content received from an information source. According to the description, they are software components loaded and executed by the IP proxy server. The difference resides apparently only in the different selection of functions ascribed to these components. All functions, however, are executed by the IP proxy server. The differentiation between transcoder and connection handler does not make much sense from a technical point of view; the technical features of the claimed invention, which are only relevant for the assessment of the invention, are the functions of these components, which are actually proper functions of the IP proxy server.

2.7 The considerations above express some doubts regarding clarity and support of the claims. However, such objections have formally not been raised in this procedure since the case poses no difficulties to subject the invention to a prior art analysis and to decide on the merits of the case.

3. The subject matter of claim 1 of the main request does not meet the requirement of inventive step in the light of prior art document D8.

3.1 Document D8 is the most appropriate starting point in the prior art for assessing inventive step. It anticipates, in fact, the whole subject matter of claim 1, except for some minor features.

Document D8 discloses a system (distributed data processing system 100) for providing information content received from an information source ("content from an originating server", cf e.g. the abstract) to a communication device (network computer, e.g. clients 108,... in figure 1, clients 404,... in figure 4). The information is provided over a collection of networks and gateways, network 102 (cf e.g. figure 1 and page 4, line 15 to page 6, line 3).

Network 102 "may include permanent connections ..., or temporary connections made through telephone connections" (cf page 4, line 19 ff.). The document expressly refers to "wireless telephones" (cf page 2, line 34), clients which support a "Wireless Markup Language (cf page 7, line 28), smart phones, and screen phones (cf page 16, line 1). It is clear therefrom that network 102 comprises or is connected to a wireless network. A wireless device like a smartphone can thus send, over such a wireless network, requests to and receive the content requested from any "originating server" coupled to network 102 (e.g. 412, 414, and 416 in figure 4; 502 in figure 5).

Furthermore, the prior art system comprises a transcoding system (transcoding proxy server e.g. page 10, line 15 ff.) comprising a plurality of

transcoders, e.g. postscript to PDF and PDF to HTML (cf figure 5), BMP to PNG converter, PNG to GIF converter, and intermediate converters for transcoding from a respective input to a respective output content type (cf e.g. page 8, line 40 to page 9, line 27). To convert N formats to M formats without intermediate converters, on the order of NxM transcoders are required (cf page 14, line 25 ff.).

Client 410 supports a wireless markup language (WML) format (cf page 7, line 28). The transcoding proxy server thus comprises suitable converters to transcode content into the WML-format if this content has been requested by client 410 (cf figure 4, client 410 and page 7, line 40 to page 8, line 38). By transcoding into the WML-format, the prior art system meets the specification in the second paragraph of present claim 1 that "the output content type is formatted appropriately for transmission over the wireless network and for the wireless mobile communication device".

The prior art system further comprises a network device (transcoding proxy server, cf 402 in figure 4, 504 in figure 5). The transcoding proxy server handles and processes the content received from an information source (cf e.g. figure 5, also page 15, line 5 ff.). It further converts various protocols to HTTP (cf page 15, line 14 ff.), where HTTP is the standard protocol to which document D8 refers (cf page 2, line 31 ff.). The transcoding proxy server, therefore, meets the definitions of connection handler in the third paragraph of claim 1.

The transcoding proxy server of the prior art system receives a connection request from a client, requesting a particular transcoder (cf e.g. 802 in figure 8).

According to the Hypertext Transfer Protocol HTTP/1.1, HTTP requests explicitly indicate the protocol and the protocol version, which can be used by the transcoding proxy server as reference to the connection handler which is to be loaded and executed. The transcoding proxy server is operable to select, based on the connection request, a particular transcoder if format conversion is requested, as well as a connection handler if protocol conversion is required (cf 806 in figure 8 in combination with page 15, line 14 ff.). It follows that the prior art document also discloses the features in the fourth, fifth, and seventh paragraphs of claim 1, except for the feature that the connection request contains a connection handler name for reference, a detail not mentioned in document D8. The transcoding proxy server establishes the connections, handles the communications, and transcodes content in both directions, from a client to an originating server, and vice versa (cf e.g. 804 and 818 in figure 8). As explained above, it is also capable of sending transcoded content e.g. in the WML-format to a wireless mobile device like a smartphone. The conversion to the WML-format (cf page 7, line 28) reduces the traffic sent over a wireless network. Therefore, document D8 also discloses the remaining features in the sixth, and eighth to tenth paragraphs of claim 1.

- 3.2 The only distinguishing feature, viz. using the connection handler name as a basis for selecting the connection handler, does not involve an inventive step, considering that a programmer is free to choose any naming scheme for software components that fits his needs. Choosing descriptive names is a matter of

convenience and does not involve any further technical considerations. IP-conform requests normally include the name of the communication protocol, e.g. HTTP, and the protocol version, e.g. 1.1. The idea to use these "names" in connection with an appropriate naming scheme for addressing and selecting the appropriate communication software is straightforward and obvious. The invention claimed does hence not meet the requirement of inventive step.

- 3.3 The appellant argued in the oral proceedings that document D8 provided for a kind of many-to-one option of protocol conversions (various protocols to HTTP). This was an important difference with respect to the many-to-many option provided by the invention, which allowed the conversion between one of the various protocols suitable for communication over a wireless network, for example the proprietary IP protocol, and one of the many different protocols used in the Internet or in other networks.

In the Board's view, even if such a restrictive reading of document D8 was accepted, the skilled person would consider such a many-to-many option for protocol conversions as a simple and obvious extension of the many-to-one conversions disclosed in prior art document D8. The question whether the technical teaching in document D8 is indeed restricted in the way argued by the appellant is therefore not decisive and can be left unanswered.

Auxiliary requests I and II

4. Claim 1 of auxiliary request I specifies that "the respective output content type includes compiled WML

(WMLC)". WMLC designates a standard format for Web documents. The Board's view is that if there was a need for retrieving WMLC-documents from the Internet, the skilled person reading document D8 would consider it obvious to take a transcoder for WMLC into consideration. Technically this posed no problem. Therefore this feature does not remedy the lack of inventive step.

5. Claim 1 of auxiliary request II further develops the concept of transcoders in claim 1 of the main request by adding the functions of creating a plurality of transcoding chains, each chain associating more than one transcoder, and searching and selecting a transcoding chain matching the received content type and one of the accepted content types.

Such transcoder chains are already disclosed in document D8, as illustrated e.g. in figure 8 where a document in format X is converted into a document in format Z via an intermediate transcoder (cf page 11 line 14 ff.). Therefore, this request does not add anything new over prior art document D8 and the subject-matter of the claim does not involve an inventive step.

Auxiliary request III

6. Auxiliary request III further specifies a particular configuration of the network device within a private network and behind a security firewall. Secure communication to a wireless mobile communication device is achieved by encrypting communications directed to and decrypting communications received from the wireless mobile communication device by means of a

network server, which is also arranged within the private network and behind the security firewall.

The Board has admitted the claims of this request to the proceedings. The particular arrangement of a transcoding proxy server within a private network and a security firewall in combination with the encryption/decryption of the communications between a wireless mobile communication device and the proxy server has not been dealt with in the decision under appeal, and not, at least not to any detail, in the communications from the examining division. Moreover, the original claims directed to a security firewall and the encryption of data (dependent claims 43, 45, 74, and 81) have been excluded, in the international phase, from the prior art search and from the examination on novelty, inventive step and industrial applicability. On the basis of auxiliary request III the Board judges it necessary therefore to reverse the decision under appeal and to remit the case to the examining division for further prosecution.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution.

The Registrar:

The Chairman:

T. Buschek

S. Wibergh