

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT: 6,466,568

INVENTOR: Alex Krister Raith,
James Ragsdale and John Diachina

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TITLE: MULTI-RATE RADIOCOMMUNICATION SYSTEMS AND
TERMINALS

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OPPOSITION DECLARATION OF HARRY BIMS, PH.D.

I, Harry Bims, declare as follows:

General Background

1. My name is Harry Bims. I previously submitted a Declaration of Harry Bims, PhD, which I understand was filed with a Petition for *Inter Parties* Review of U.S. Patent No. 6,466,568 as Exhibit 1009. My background is described in that Declaration.

2. I have been asked for my opinions on certain issues relating to a Patent Owner's Motion to Amend U.S. Patent No. 6,466,568 Under 37 C.F.R. § 42.121, which I have reviewed.

Broadcom v. Ericsson

IPR2012-00602

The '568 Patent

3. Even if the '568 patent were to disclose a service type identifier that identifies more than just the "type of information" as alleged in Owner's Motion to Amend, it only discloses identifying channel coding, not the broader "transmission characteristics of a service" as advocated by Owner. During prosecution, Owner cited to the following passage:

[T]he FOC fields may also serve the purpose of service type identifier. In this embodiment, the FOC can provide information regarding the type of service which the associated payload is currently supporting, the channel coding and/or interleaving associated therewith. ('568 at 9:27-32; Ex. 1001).

Referring to this passage, Owner argued that "it is clear that the FOC field can provide information regarding three different aspects of the transmission, namely, 1) type of service, 2) channel coding, and 3) interleaving. These different aspects can be alternatives or they can all be indicated by the FOC field." (Ex. 1016 at 5). Interleaving is not a transmission characteristic, but just a way of rearranging data prior to transmission. Therefore the '568 patent only supports identifying channel coding in addition to the contents of the payload.

Morley Anticipates Amended Claims 8-13

4. In my original Declaration I explained why Morley anticipated claims 1-6 of the '568 patent. Below I provide an additional discussion of Morley in opposition to Patent Owner's Amended Claims 8-13.

5. Owner's proposed claims 8-13 are invalid over Morley, which discloses an identifier that identifies a type of data in the payload and a transmission characteristic of the data. Morley discloses using a header to identify the type of information conveyed in the payload for the reasons set forth in my original Declaration. (Ex. 1009). In addition, Morley discloses identifying a transmission characteristic of the service because Morley discloses using the header to determine the rate – a transmission characteristic – at which to process the received data.

Morley in view of Raith Renders Obvious Claims 8-13

6. Morley discloses that the “format of the mux frame may need to change according to the particular characteristics of a call.” (Morley at 7:27-29; Ex. 1002). Morley discloses optimizing the structure of the multiplexer frames “according to ‘long term’ requirements of the application and protocol layers,” such as voice coder data rate and frame rate, and data bandwidth requirements. (Morley at 5:60-64; Ex. 1002). The '568 patent explains that bandwidth considerations are transmission characteristics. ('568 patent at 2:41-42; Ex. 1001).

Therefore a person of ordinary skill in the art would understand that Morley contemplates changing the format of the mux frame based on transmission characteristics, such as the voice coder data rate and frame rate, and data bandwidth requirements.

7. Raith discloses using a field to identify the type of channel coding to support a variable channel coding rate. (Raith at 12:15-20; Ex. 1024). Raith discloses that if errors are detected for a transmission rate and the detected errors exceed a predetermined threshold level, the degree of channel coding can be changed for the transmission rate to achieve optimal channel coding. (Raith at 11:54-59; Ex. 1024). To synchronize the base station and mobile station to changes in the type of channel coding, Raith discloses providing an indication of the type of channel coding that is being used. (Raith at 12:6-16; Ex. 1024).

8. Therefore, Morley discloses using the header to identify the contents of a frame (voice and/or different types of data), and using different types of error protection for voice and data channels, and in view of Raith's disclosure of supporting variable channel coding for different transmission rates it would have been obvious to modify the header in Morley to indicate different types of channel coding for the different voice and data channels.

9. Raith discloses using a variable channel coding rate (Raith at 12:15-20; Ex. 1024) to transmit different services, such as voice channels, traffic

channels, paging/access channels and control channels (Raith at 2:28-31; Ex. 1024). Morley discloses using frame types to indicate whether the contents of a frame include data from voice and/or different data channels. Morley also discloses a “Not Defined” frame type 3 that is “reserved for future expansion where more frame types may be required” (Morley at 7:23-25), and discloses optimizing the structure of the multiplexer frames “according to ‘long term’ requirements of the application and protocol layers” (Morley at 5:60-64).

10. It would have therefore been obvious to a person of skill in the art to use the frame types in Morley to indicate different channel coding rates in addition to the contents of the frame. Morley discloses using error protection to “ensure error free data to the protocol and application layers.” (Morley at 8:34-36; Ex. 1002). A person of ordinary skill in the art would have combined Morley with Raith to achieve the predictable result of improving error protection for Morley’s packet transmissions. Raith discloses that its variable channel coding technique “is useful in obtaining an optimal degree of channel coding by weighing the trade-offs between the amount of channel coding and the number of retransmissions to achieve the highest throughput.” (Raith at 11:60-65; Ex. 1024). Raith further discloses that “while the amount of information data is decreased, there is a higher probability that the information data is being correctly received.” (Raith at 12:1-5;

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