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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

PATENT: 6,772,215

INVENTOR: Bela Rathonyi, et. al.

FILED: March 29, 2000

ISSUED: August 3, 2004

TITLE: METHOD OF MINIMIZING FEEDBACK RESPONSES  
IN ARQ PROTOCOLS

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**REPLY 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. 6,772,215 as Exhibit 1004. My background is described in the prior Declaration.

2. I have been asked for opinions on certain issues relating to a Patent Owner's Response by Ericsson Under 37 C.F.R. § 42.120, which I have reviewed.

Broadcom v. Ericsson  
IPR2013-00601  
Broadcom 1013

## **Seo Anticipates the Challenged Claims of the '215 Patent**

1. In my original Declaration I explained why Seo anticipates claims 1, 2, 4, 6, 8, 15, 22, 25, 26, 29, 32, 34, 45, 46, 49, 52, and 54 of the '215 patent.

Below I provide an additional discussion of Seo in reply to Patent Owner's Response.

2. The existence of padding in Seo does not mean messages have a fixed length. Messages could have one of a number of different possible lengths, but use padding to align frames so that they have an integer number of octets. For example, frames could have variable lengths of 8, 16, 32, or 64 octets, and yet bits of padding (e.g., 4 bits) could be used to align a message to one of these frame length boundaries. Although the different frame lengths are fixed, the messages within the frame (excluding the padding) are variable in length. Such a system would also not be considered fixed length. Seo does not indicate that the NAK message has a fixed length. The fact that Seo can include different numbers of bitmaps also indicates variable length.

3. Even if all the NAK messages in Seo were the same fixed length, it would not mean that the NAK messages all have the same fields. For example, a message could use a number of bits to contain an alphanumeric string identifying a person's eye color, while a different message could use the same number of bits to

contain an integer representing the balance in a person's bank account. These two messages may be the same length, but they are unquestionably not the same type.

4. Seo's Figure 4 shows a set of possible fields that can be used in creating a NAK message, but there is no requirement in Seo that all of the fields in the figure must be used in all types of NAK messages. In fact, Seo's Figure 4, columns 5-6, and claims 10-11 describe how different fields "exist" in different types of NAK messages, as indicated by the value of NAK\_TYPE. Fields relating to NAK\_MAP exist when the NAK message is a bitmap type (NAK\_TYPE = 01), and different fields (e.g., FIRST, LAST) exist for the First/Last list type of NAK message (NAK\_TYPE = 00). (Seo at claims 10-11; Ex. 1002).

5. I read this to mean what it says. When a field exists, it is present in the NAK message; when a field does not exist, it is not present. This is a common sense reading of what "exist" means.

6. I do not believe it would make sense to include unnecessary fields in a NAK message, such as FIRST and LAST fields in a NAK message of the bitmap NAK\_TYPE, or bitmap fields in a First/Last type of NAK.

7. I believe that the text of the IS-707 communication standard from April 1999 (Ex. 1010) provides further confirmation. A person reading the April 1999 IS-707 standard would understand that bitmap fields exist when the NAK is a bitmap type, and not when the NAK is a list type; and that FIRST and LAST fields

exist with the list type of NAK, and not with the bitmap type of NAK. As shown at page 4-3 of Ex. 1010, when NAK\_TYPE is “00”, the FIRST and LAST fields follow the L\_SEQ\_HI field, exactly as shown in Seo Figure 4, and when NAK\_TYPE is “01”, the NAK\_MAP\_Count field follows the L\_SEQ\_HI field (and the FIRST and LAST fields do not exist), just as in Seo. Because the type-specific fields only exist for their particular type of NAK message, Seo discloses a type identifier field, even under Patent Owner’s unsupported claim construction.

8. Even if the Board were to conclude (1) that padding means fixed length (even though I believe it does not), (2) that fixed length means that fields that “exist” and do “not exist” are both present (even though I do not believe this is logical), and (3) that Seo always uses the same fields even though there is no reason to (and which I do not believe is true), a person of ordinary skill would interpret Seo to disclose two types of NAK messages:

- a first type that has all zeroes in the bitmap-related fields and non-zero data in the list-related fields; and
- a second type that has all zeroes in the list-related fields and non-zero data in the bitmap-related fields.

The ’215 patent does not support any special construction of the term “type.” Two messages would still be considered to be different “types” where the messages are constrained by a consistently applied set of rules, such that some fields are always

zeroes in some circumstances, and other fields are always zeroes in other circumstances.

9. The alleged benefit of the '215 patent is that one type of feedback response might use fewer bits in some cases, and another type of feedback response might use fewer bits in other cases. For example, Table 1 shows that a consecutive run of missing sequence numbers (example 1) is more efficient as a list; while a non-consecutive set of individual sequence numbers (example 4) would be more efficient as a bitmap. ('215 Patent at 4:19-29; Ex. 1001). I do not believe that the benefit of saving bits arises from any alleged distinction of whether information is in a payload or a header.

10. The '215 patent refers to its Figures 4-7 as “messages” without differentiating parts of those messages, such as those fields that include control information (type) and those fields that contain data content. I believe that the type field in Figures 4-7 of the '215 patent contain bits that tell a receiver how to process the substance of the data that follows, and therefore would be considered part of a header as opposed to a “payload.”

#### **Availability for Cross-Examination**

11. In signing this declaration, I recognize that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be

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