

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

QUALCOMM INCORPORATED

Petitioner

v.

REMBRANDT WIRELESS TECHNOLOGIES, LP

Patent Owner

CASE NO. IPR2020-00510

U.S. PATENT 8,023,580

SECOND DECLARATION OF JOHN VILLASENOR, PH.D.

Qualcomm Incorporated v. Rembrandt Wireless Techs. LP.

IPR2020-00510

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1. My name is John Villasenor. I previously submitted a declaration in the above-captioned *inter partes* review (“IPR”) proceeding challenging U.S. Patent No. 8,023,580 (“the ’580 Patent”), and my background and qualifications are described therein. EX1002 at 2-6. Additionally, my curriculum vitae is available in EX1055.

2. In its Background section, the ’580 Patent states:

In existing data communications systems, a transmitter and receiver modem pair can successfully communicate only when the modems are compatible at the physical layer. That is, the modems must use compatible modulation methods. This requirement is generally true regardless of the network topology. For example, point-to-point, dial-up modems operate in either the industry standard V.34 mode or the industry standard V.22 mode. Similarly, in a multipoint architecture, all modems operate, for example, in the industry standard V.27bis mode.

EX1001 at 1:27-36. This section references three “industry standard[s],” V.22, V.34, and V.27bis. These references relate to recommendations promulgated by the Telecommunication Standardization Sector of the International Telecommunication Union (“ITU”), which can be obtained from the ITU’s website.

3. The Patent’s reference to “industry standard V.22 mode” refers to the ITU recommendation available for download from <https://www.itu.int/rec/T-REC-V.22-198811-I>. EX1056. EX1057 appears to be a version of the V.22 recommendation available at the time the priority application to the ’580 Patent was

filed, as it bears a 1993 copyright date. EX1057 at electronic page 2.

4. The Patent's reference to "industry standard V.34 mode" refers to the ITU recommendation available for download from <https://www.itu.int/rec/T-REC-V.34-199409-S>. EX1058. EX1059 appears to be a version of the V.34 recommendation available at the time the priority application to the '580 Patent was filed, as it bears a 1994 copyright date. EX1059 at i.

5. The Patent's reference to "industry standard V.27bis mode" refers to the ITU recommendation available for download from <https://www.itu.int/rec/T-REC-V.27bis-198811-I>. EX1060. EX1061 appears to be a version of the V.27bis recommendation available at the time the priority application to the '580 Patent was filed, as it bears a 1993 copyright date. EX1061 at electronic page 2.

6. ITU Recommendations V.22, V.27bis, and V.34 are individual portions of a larger collection of ITU publications concerning "Data Communication Over the Telephone Network" that is collectively referred to as "ITU V-Series Recommendations." *See* EX1057 at electronic page 1, EX1059 at electronic pages 1 and 2, EX1061 at electronic page 1.

7. Each V-Series recommendation is not intended to stand alone, but rather is to be viewed in the context of the other V-Series recommendations, where each recommendation concerns a subpart of the entire V-Series. For example, the portion of the V-Series recommendations that contains recommendations pertaining

to V.22, V.27bis, and V.34 is described as concerning “Interfaces and voiceband modems.” EX1059 at electronic page 2. Other portions of the V-Series specification concern other aspects of data communication related to the telephone network. For example, the portion of the V-Series designated V.100–V.199 concerns “Interworking with other networks.” *Id.*

8. One recommendation from this portion of the V-Series recommendations is V.110, which concerns “Support by an ISDN of data terminal equipments with V-series type interfaces;” V.110 is available for download from <https://www.itu.int/rec/T-REC-V.110-199209-S>. EX1062. EX1063 appears to be a version of the V.110 recommendation available at the time the priority application to the ’580 Patent was filed, as it bears a copyright date of 1993. EX1063 at i.

9. Another recommendation from the “Interworking with other networks” portion of the V-Series recommendations is V.120, which concerns “Support by an ISDN of data terminal equipment with V-series type interfaces with provision for statistical multiplexing;” V.120 is available for download from <https://www.itu.int/rec/T-REC-V.120-199209-S>. EX1064. EX1065 appears to be a version of the V.120 recommendation available at the time the priority application to the ’580 Patent was filed, as it bears a copyright date of 1993. EX1065 at i.

10. I accessed each of the exhibits referenced herein online on July 22 and 23, 2020.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 23, 2020

John Villasenor

John Villasenor