**IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION**

COMMTECH IP LLC, Plaintiff, v. **ENEA AB and ENEA SOFTWARE & SERVICES, INC.,** Defendants.	C.A. NO. _____ **JURY TRIAL DEMANDED** **PATENT CASE**

**ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT
AGAINST ENEA AB AND ENEA SOFTWARE & SERVICES, INC.**

Plaintiff Commtech IP LLC files this Original Complaint for Patent Infringement against Enea AB and Enea Software & Services, Inc. (collectively "Defendants"), and would respectfully show the Court as follows:

I. THE PARTIES

1.   Plaintiff Commtech IP LLC ("Commtech" or "Plaintiff") is a Texas limited liability company with its principal place of business at 15922 Eldorado Pkwy, Suite 500-1599, Frisco, TX 75035.

2.   On information and belief, Defendant Enea AB is a foreign corporation organized and existing under the laws of Sweden, with a place of business at 2555 E. Camelback Road, Suite 280, Phoenix, AZ 85016.

3.   On information and belief, Defendant Enea Software & Services, Inc. ("Defendant") is a corporation organized and existing under the laws of Texas, with a registered agent at C T Corporation System, 1999 Bryan St., Ste. 900 Dallas, TX 75201.

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II.   JURISDICTION AND VENUE

4.   This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction of such action under 28 U.S.C. §§ 1331 and 1338(a).

5.   On information and belief, Defendants are subject to this Court's specific and general personal jurisdiction, pursuant to due process and the Texas Long-Arm Statute, due at least to its business in this forum, including at least a portion of the infringements alleged herein. Furthermore, Defendant Enea Software & Services, Inc. is subject to this Court's specific and general personal jurisdiction because Defendant Enea Software & Services, Inc. is a Texas corporation.

6.   Without limitation, on information and belief, within this state, Defendants have used the patented inventions thereby committing, and continuing to commit, acts of patent infringement alleged herein. In addition, on information and belief, Defendants have derived revenues from its infringing acts occurring within Texas. Further, on information and belief, Defendants are subject to the Court's general jurisdiction, including from regularly doing or soliciting business, engaging in other persistent courses of conduct, and deriving substantial revenue from goods and services provided to persons or entities in Texas. Further, on information and belief, Defendants are subject to the Court's personal jurisdiction at least due to its sale of products and/or services within Texas. Defendants have committed such purposeful acts and/or transactions in Texas such that it reasonably should know and expect that it could be haled into this Court as a consequence of such activity.

7.   Venue is proper in this district under 28 U.S.C. § 1400(b). On information and belief, Defendant Enea Software & Services, Inc. is incorporated in Texas. On information and

belief, Defendant Enea AB is a foreign corporation incorporated in Sweden and is therefore subject to suit in any judicial district. On information and belief, from and within this District Defendants have committed at least a portion of the infringements at issue in this case.

8.   For these reasons, personal jurisdiction exists and venue is proper in this Court under 28 U.S.C. § 1400(b).

III. COUNT I
(PATENT INFRINGEMENT OF UNITED STATES PATENT NO. 6,557,715)

9.   Plaintiff incorporates the above paragraphs herein by reference.

10.   On June 10, 2003, United States Patent No. 6,557,715 ("the '715 Patent") was duly and legally issued by the United States Patent and Trademark Office. The application leading to the '715 patent was filed on March 10, 2000. (Ex. A at cover).

11.   The '715 Patent is titled "Modem Apparatus, Communication Control Apparatus, Communications Terminal Apparatus, and Communication Control Method." A true and correct copy of the '715 Patent is attached hereto as Exhibit A and incorporated herein by reference.

12.   Plaintiff is the assignee of all right, title and interest in the '715 patent, including all rights to enforce and prosecute actions for infringement and to collect damages for all relevant times against infringers of the '715 Patent. Accordingly, Plaintiff possesses the exclusive right and standing to prosecute the present action for infringement of the '715 Patent by Defendants.

13.   The invention in the '715 Patent relates to a modem apparatus, communication control apparatus and communications terminal apparatus with the function of performing communications based on communication procedures conforming to ITU-T Recommendations. (*Id.* at col. 1:10-15).   ITU-T Recommendations are non-mandatory standards defining how telecommunication networks operate and interwork published by the Telecommunication

Standardization Sector (ITU-T).   (https://www.itu.int/en/ITU-T/publications/Pages/recs.aspx; https://en.wikipedia.org/wiki/Category:ITU-T_recommendations).

14.   Conventionally, a communications terminal apparatus provided with a modem for performing communications based on communications procedures conforming to ITU-T Recommendation V.34 initiates a communication according to a sequence specified in ITY-Recommendation V.8. Recommendation V.34 relates to "A modem operating at data signaling rates of up to 33 600 bit/s for use on the general switched telephone network and on leased point-to-point 2-wire telephone-type circuits."   (https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=4203).   Recommendation V.8 relates to "Procedures for starting sessions of data transmission over the public switched telephone network." (https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=5242).

15.   Specifically, in response to a call placed from a calling terminal, an answering terminal transmits an ANSam signal to the calling terminal. (Ex. A at col. 1:24-26). The ANSam signal is a sinewave signal at 210 HZ, amplitude-modulated, as defined in Section 7.2 of Recommendation V.8. When the calling terminal detects the ANSam signal, an exchange of call menu (CM) and joint menu (JM) signals are exchanged according to the Recommendation V.8. The CM signal initiates the process of modulation-mode selection and indicates modulation modes available in the call DCE (Data Circuit-terminating Equipment). (Recommendation V.8 at Section 7.3). The JM signal is transmitted in answer to the CM to indicate modulation modes available jointly in the call and answer DCEs. The exchange of CM/JM signals enables the DCEs to choose the best V-series modulation mode from those available in both the call and answer DCE's for a forthcoming data session on a public switch telephone network (PSTN).

16.   To begin the CM/JM exchange, the calling terminal transmits a CM signal to the answering terminal. (Ex. A at col. 1:26-28).   When the answering terminal detects the CM signal, the answering terminal transmits a JM signal to the calling terminal. (*Id.* at col. 1:28-30). Thereafter, the communication procedure shifts from that conforming to Recommendation V.8 to that conforming to Recommendation V.34. (*Id.* at col. 1:30-32).

17.   A problem can arise in the case where transmission and reception of procedure signals are performed according to the sequence specified in Recommendation V.8 but the calling terminal incorrectly recognizes the procedure signal transmitted from the answering terminal. (*Id.* at col. 1:33-37).   When the calling terminal incorrectly recognizes the procedure signal, the calling terminal and answering terminal each continues transmitting the procedure signal based on the different communication procedure until receiving an expected signal. (*Id.* at col. 1:35-40).   The case sometimes occurs thereby where communication operations are looped in the calling terminal and answering terminal. (*Id.* at col. 1:40-42).

18.   This looping is explained in the context of an exemplary prior art apparatus. One communication terminal apparatus provided with a modem for communicating according to Recommendation V.8, sends a CM signal expecting a JM signal, but instead detects a DIS (Data Identification Signal) signal conforming to Recommendation T.30 (Procedures for document facsimile transmission in the general switched telephone network).   (*Id.* at col. 1:44-53). Specifically, the communication terminal apparatus judges a flag pattern of the DIS signal to detect the DIS signal. (*Id.* at col. 1:53-55).   However, because the DIS signal is detected by judging the flag pattern of the DIS signal, procedure signals having no flag pattern cannot be detected. (*Id.* at col. 1:56-59).   Such signals having no flag pattern, and therefore cannot be detected by the procedure signals of the communication terminal apparatus include:

- AC (signal states ACAC…AC for an even number of symbol states) signal transmitted from the answering terminal to a calling terminal based on conforming to Recommendation V.32 (A family of 2-wire, duplex modems operating at data signaling rates of up to 9600 bit/s for use on the general switched telephone network and on leased telephone-type circuits) or V.32bis (A duplex modem operating at data signaling rates of up to 14,400 bit/s for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits), and

- USB1 (Unscrambled binary ones modulated by an answering modem) signal transmitted from the answering terminal to a calling terminal based on conforming to Recommendation V.22 (1200 bits per second duplex modem standardization for use in the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits) or V.22bis (2400 bits per second duplex modem using the frequency division technique standardized for us on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits).

(*Id.* at col. 1:60 – col. 2:2). In the case where such procedure signals are transmitted from the answering terminal to the calling terminal, the calling terminal continues transmitting the CM signal based on Recommendation V.8 but the answering terminal continues transmitting the USB1 signal conforming to Recommendation V.22 or the AC signal confirming to Recommendation V.32. (*Id.* at col. 2:2-10). With this problem the communications operations are looped between the calling and answering terminal and the data communication cannot be performed in such an apparatus. (*Id.* at col. 2:10-12).

19.   The object of the claimed invention is to provide a modem apparatus, communication control apparatus, and communication control method that can respond to communications specified in an arbitrary Recommendation, including a communications procedure conforming to Recommendation V.34, a facsimile communication procedure conforming to Recommendation T.30, and a data communications procedure based on, for example, Recommendation V.22/V.22bis or V.32/V.32bis, that prevents communication operations from being looped. (*Id.* at col. 2:20-29).

20.   The '715 patent provides a block diagram of an exemplary embodiment of a communications control unit of the communications terminal apparatus according to the claimed invention:
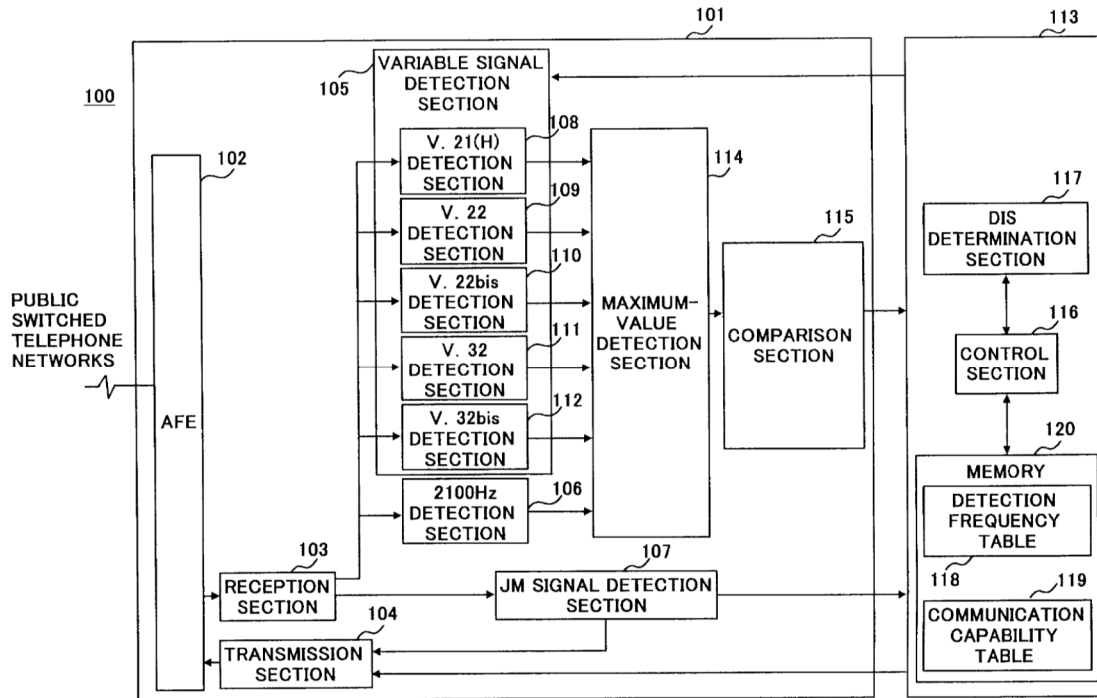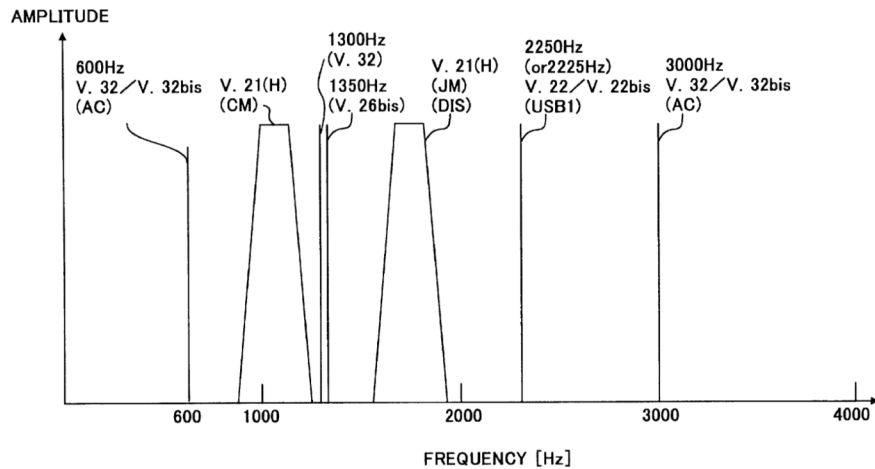

FIG.3

(*Id.* at col. 2:54-56, col. 3:15-45, Fig.3).   The Variable signal detection section (105) has a plurality of band pass filters each capable of calculating an integrated value of a signal component at a specific carrier frequency. (*Id.* at col. 4:28-30).

21.   For the purposes of a non-limiting example, the '715 patent also provides a figure that illustrates specific carrier frequencies at which signal components can be calculated in variable signal detection (105):

(*Id.* at col. 2:57-61, col. 4:46-48, Fig. 4). In the context of Fig. 3 of the '715 patent:

- V.21(H) detection section (108) calculates the integrated value of the signal component at a carrier frequency of 1750 Hz used in Recommendation V.21(H), specifically at the carrier frequency of the JM signal that is transmitted from an answering terminal to a calling terminal in Recommendation V.8, and the integrated value of the signal component at the carrier frequency of the DIS signal that is transmitted from an answering terminal to a calling terminal in Recommendation T.30.

- V.22 detection section (109) and V.22bis detection section (110) each calculates an integrated value of a signal component at a carrier frequency of 2250 Hz used in Recommendation V.22 and Recommendation V.22bis, specifically at the carrier frequency of the USB1 signal that is transmitted from an answering terminal to a calling terminal in Recommendation V.22 and Recommendation V22bis.

- V.32 detection section (111) and V.32bis detection section (112) each calculates integrated values of signal components at carrier frequencies of 600 Hz and 3000 Hz used in Recommendation V.32 and Recommendation V.32bis, specifically, at the carrier frequencies of the AC signal that is transmitted from an answering terminal to a calling terminal in Recommendation V.32 and Recommendation.

(*Id.* at col. 4:48 – col. 5:20). The extensive technical details of the operation of the exemplary embodiment are further discussed in the specification of the '715 patent. (*Id.* at col 5:21 – col. 17:62). Prior to the disclosures in the '715 patent the combination of Recommendation T.30 with Recommendation V.34 and Recommendation V.22/V.22bis, and the combination of

Recommendation T.30 with Recommendation V.34 and Recommendation V.32/V.32bis was not technically feasible.

22.   By detecting the signal at the carrier frequency of the procedure signal confirming to an arbitrary type of Recommendation transmitted from an answering terminal, it is possible to recognize the type of Recommendation based on which the answering terminal performs a communication.   (*Id.* at col. 17:63 – col. 18:2).   Specifically, it is possible to continue communications according to a communication procedure based on Recommendation V.34, a facsimile communication procedure based on Recommendation T.30, and a data communication procedure based on Recommendations V.22 and V.22bis or Recommendations V.32 and V.32bis. (*Id.* at col. 18:8-13).   The invention therefore makes it possible to prevent operations of a communications control unit from being looped in the case where the procedure signal transmitted from a communications control unit is different from the procedure signal transmitted from the answering terminal.   (*Id.* at col. 18:13-18).   The invention also allows achieving faster page transmissions through recognition of Recommendation V.32/V.32bis having data rates of up to 14,400 bit/s.   This results in reducing the communication time and communication cost spent by connecting to an answering terminal with which the model apparatus cannot communicate.   (*Id.* at col. 18:22-25).

23.   The unconventional nature of the claims of the '715 patent are exemplified by the fact that the issued claims were not subject to a rejection during the prosecution history.

24.   **<u>Direct Infringement.</u>**   Upon information and belief, Defendants have been directly infringing at least claims 1 and 5 of the '715 patent in Texas, and elsewhere in the United States, by performing actions comprising making, using, selling, and offering for sale a communication apparatus that satisfies the limitations of claims 1 and 5, including without

limitation   the   Demod-Bricks   ("Accused   Instrumentality").   (E.g.,
https://www.enea.com/globalassets/downloads/protocols/netbricks/demod-bricks--022874.pdf).

25.   The Accused Instrumentality acts as a communication apparatus at a calling side
for performing transmission and reception of a signal (*e.g.*, the Accused Instrumentality offers
ITU-T V.34 recommended operation that supports facsimile send and receive) with another
communication apparatus at an answering side (*e.g.*, another modem).

26.   The Accused Instrumentality acts as a calling transmitter that transmits signals
specified in a predetermined Recommendation (*e.g.*, V.34, V.8 and V.8bis signaling, etc.). (*Id.*).

27.   The Accused Instrumentality acts as a calling receiver that receives signals
transmitted from the communication apparatus at the answering side (*e.g.*, another modem that
can receive Recommendations (*e.g.*, V.34, V.8 and V.8bis, etc.)). (*Id.*).

28.   The Accused Instrumentality acts as a calling detector that detects the signals
received by the calling receiver of the Accused Instrumentality while the calling transmitter
transmits CM signals ("Signal CM initiates the process of modulation-mode selection") specified
in Recommendation V.8 (the Accused Instrumentality receiver supports V.8). (*e.g.*,
https://www.enea.com/globalassets/downloads/protocols/netbricks/demod-bricks--022874.pdf;
https://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-V.8-200011-I!!PDF-
E&type=items).

29.   The Accused Instrumentality acts as a controller that performs a communication
procedure as specified in recommendation V.34 when the calling detector detects JM signals
specified   in   Recommendation   V.8.   (e.g.,
https://www.enea.com/globalassets/downloads/protocols/netbricks/demod-bricks--022874.pdf).
When the calling transmitter of the Accused Instrumentality transmits a CM signal to the

answering terminal of the Accused Instrumentality, the answering terminal receives the signal and in return transmits the JM signal as specified in recommendation V.8. (*Id.*). The controller in the calling receiver of the Accused Instrumentality detects a JM signal transmitted from the answering terminal (*e.g.*, another modem) and thereafter, the communication is performed according to Recommendation V.34. (*Id.*; https://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-V.8-200011-I!!PDF-E&type=items). When the calling receiver of the Accused Instrumentality detects the JM signal, as specified in recommendation V.8, it starts operating at data signaling rate of up to 33,600 bit/s. (*E.g.*, *id.*).

30.   The Accused Instrumentality is capable of performing a communication procedure at the calling side specified in Recommendation T.30 when the calling detector detects DIS signals specified in Recommendation T.30. (*e.g.*, *id.*; https://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-T.30-200509-I!!PDF-E&type=items). When the calling transmitter transmits a CM signal to the answering terminal (*e.g.*, another modem), the answering terminal receives the CM signal and in response transmits a DIS signal to the calling receiver. The calling receiver detects a DIS signal and thereafter, the communication is performed according to Recommendation T.30. (*Id.*).

31.   The Accused Instrumentality is capable of performing a communication procedure, at the calling side (the Accused Instrumentality), specified in Recommendation V.22/V.22bis when the calling detector detects USB1 signals specified in Recommendation V.22/V.22bis. (*e.g.*, *id.*; https://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-V.22bis-198811-I!!PDF-E&type=items). When the calling transmitter transmits a CM signal to the answering terminal (*e.g.*, another modem), the answering terminal receives the CM signal and in

response transmits the USB1 signal as specified in Recommendation V.22/V.22bis, the controller in the calling receiver (the Accused Instrumentality) detects USB1 signals and instructs to starts data communication over the telephone network at 1200/2400 bits per second in duplex mode according to recommendation V.22/V.22bis. (*Id.*).

32.   The Accused Instrumentality is capable of performing a communication procedure, at the calling side (the Accused Instrumentality), specified in Recommendation V.32/V.32bis when the calling detector detects AC signals specified in Recommendation V.32/V.32bis. (*e.g.*, https://www.enea.com/globalassets/downloads/protocols/netbricks/demod-bricks--022874.pdf).   When the calling transmitter transmits a CM signal to the answering terminal (another modem), the answering terminal (*e.g.*, another modem) receives the CM signal and in response transmits AC signals to the calling receiver. The calling receiver detects AC signals and thereafter, the communication is performed according to Recommendation V.32/V.32bis. (*Id.*).

33.   Plaintiff has been damaged as a result of Defendant's infringing conduct. Defendants are thus liable to Plaintiff for damages in an amount that adequately compensates Plaintiff for such Defendant's infringement of the '715 patent, *i.e.*, in an amount that by law cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

34.   On information and belief, Defendants will continue its infringement of one or more claims of the '715 patent unless enjoined by the Court. Each and all of the Defendant's infringing conduct thus causes Plaintiff irreparable harm and will continue to cause such harm without the issuance of an injunction.

35.   On information and belief, Defendants have had at least constructive notice of the '715 patent by operation of law, and there are no marking requirements that have not been complied with.

IV. **JURY DEMAND**

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

V. **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests that the Court find in its favor and against Defendant, and that the Court grant Plaintiff the following relief:

a.   Judgment that one or more claims of United States Patent No. 6,577,715 have been infringed, either literally and/or under the doctrine of equivalents, by Defendant;

b.   Judgment that Defendants account for and pay to Plaintiff all damages to and costs incurred by Plaintiff because of Defendant's infringing activities and other conduct complained of herein;

c.   That Plaintiff be granted pre-judgment and post-judgment interest on the damages caused by Defendant's infringing activities and other conduct complained of herein;

d.   That Defendants be permanently enjoined from any further activity or conduct that infringes one or more claims of United States Patent No. 6,577,715; and

e.   That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.

December 28, 2018

Respectfully Submitted,

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