

**UNITED STATES PATENT AND TRADEMARK OFFICE**

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

ERICSSON INC. and TELEFONAKTIEBOLAGET LM ERICSSON,  
Petitioners

v.

INTELLECTUAL VENTURES II LLC  
Patent Owner

---

Case IPR2014-01185  
Patent 7,269,127

---

**PATENT OWNER RESPONSE**

Mail Stop PATENT BOARD  
Patent Trial and Appeal Board  
U.S. Patent & Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Table of Contents**

I. Introduction.....1

II. The '127 patent provides an innovative wireless transmitter.....2

    A. The serious limitations of existing training designs—excessive training time reduced overall communication efficiency. ....2

    B. The '127 patent provides an innovative training sequence design. ....5

        1. The encoder element. ....7

        2. The modulator element. ....7

        3. A frame structure embodiment from the '127 patent. ....8

III. Claims 1–3 and 5 are patentable over the combination of Schmidl and Arslan [Ground 1].....11

    A. The combination of Schmidl and Arslan does not disclose a “pilot/training symbol inserter configured *to insert pilot symbols into data blocks*” as required by independent claim 1. ....11

        1. The broadest reasonable interpretation of the term “pilot symbol” is a “frequency domain symbol for refining the calibration of a receiver to a transmitter.” .....12

        2. The system resulting from the combination of Schmidl and Arslan does not “insert pilot symbols into data blocks.” .....21

    B. The encoder of Schmidl and Arslan does not include the “pilot/training symbol inserter” element in claim 1.....27

IV. Dependent claims 4 and 6–10 are patentable over the combination of Schmidl, Arslan, and Kim [Ground 2]. ....28

V. Dependent claim 17 is patentable over the combination of Schmidl, Arslan, Kim, and Heiskala [Ground 3]. ....28

A. Petitioners’ proposed combination does not apply because the transmitter of claim 17 includes a single encoder coupled to two modulators and two antennas. ....29

B. Claim 17 is consistent with the transmitter disclosed in the specification of the ’127 patent. ....31

C. Claim 17, which has one encoder, is not rendered obvious by the combined transmission system of Heiskala and Schmidl, Arslan and Kim, which has two encoders operating in parallel. ....32

VI. Conclusion .....35

**Table of Authorities**

Statutes

35 U.S.C. § 103 .....31

Regulations

37 C.F.R. § 42.100(b) .....9

37 C.F.R. §1.57(e).....29

**Exhibit List**

<b>Exh. No.</b>	<b>Description</b>
<b>IV 2001</b>	Biography of Gordon Stüber (October 14, 2014), <a href="http://users.ece.gatech.edu/stuber/">http://users.ece.gatech.edu/stuber/</a>
<b>IV 2002</b>	Biography of Dr. Apurva N. Mody (October 14, 2014), <a href="http://www.inatel.br/iwt2013/index.php/keynote-speakers-sp-212359168/dr-apurva-n-mody">http://www.inatel.br/iwt2013/index.php/keynote-speakers-sp-212359168/dr-apurva-n-mody</a>
<b>IV 2003</b>	May 14, 2015 Official Deposition Transcript of Zygmunt J. Haas
<b>IV 2004</b>	Webster's II Dictionary
<b>IV 2005</b>	Oxford Pocket American Dictionary of Current English
<b>IV 2006</b>	Webster's New World Dictionary
<b>IV 2007</b>	Webster's Ninth New Collegiate Dictionary
<b>IV 2008</b>	Webster's II New Riverside University Dictionary
<b>IV 2009</b>	Declaration of Dirk Hartogs, Ph.D.
<b>IV 2010</b>	Curriculum Vitae of Dirk Hartogs, Ph.D.

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.