

**UNITED STATES PATENT AND TRADEMARK OFFICE**

---

**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

---

ARRIS GROUP, INC.  
Petitioner

v.

TQ DELTA, LLC  
Patent Owner

---

U.S. PATENT NO. 8,612,404

---

**DECLARATION OF LANCE MCNALLY**

## Table of Contents

I. Background and Qualifications .....	5
II. Legal Understanding .....	9
III. Material Considered .....	10
IV. The State of the Art .....	11
A. Overview of U.S. Patent 5,956,323 (“Bowie”).....	12
B. Overview of U.S. Patent 6,246,725 (“Vanzielegem”).....	13
C. Overview of ATIS/Committee T1 Standards Process .....	13
D. Overview of ANSI T1.413-1995 (“1995 ADSL Standard”).....	17
E. Overview of 97-161R1 .....	17
F. Overview of 97-319.....	18
V. Overview of U.S. Patent No. 8,612,404 (‘404 Patent).....	19
VI. Level of Ordinary Skill in the Art .....	19
VII. Claim Construction.....	21
VIII. Claims 1-20 Are Obvious in View of Bowie, Vanzielegem and the 1995 ADSL Standard .....	25
A. Claim 1 .....	25
B. Claim 1 Motivation to combine Bowie, Vanzielegem and the 1995 ADSL Standard.....	66
C. Claim 2 .....	67
D. Claim 3 .....	70
E. Claim 4 .....	73
F. Claim 5 .....	77

G. Claim 6 .....	82
H. Claim 6 Motivation to combine Bowie, Vanzielegem and the 1995 ADSL Standard.....	90
I. Claim 7 .....	91
J. Claim 8 .....	92
K. Claim 9 .....	93
L. Claim 10 .....	94
M. Claim 11 .....	95
N. Claim 11 Motivation to combine Bowie, Vanzielegem and the 1995 ADSL Standard .....	100
O. Claims 12 - 15 .....	100
P. Claim 16 .....	101
Q. Claim 16 Motivation to combine Bowie, Vanzielegem and the 1995 ADSL Standard.....	103
R. Claims 17 and 18.....	103
S. Claim 19 .....	104
T. Claim 20 .....	108
IX. Claims 1-20 Are Obvious in View of the 1995 ADSL Standard, 97-161R1 and 97-319.....	112
A. Claim 1 .....	112
B. Claim 1 Motivation to combine the 1995 ADSL Standard, 97-161R1 and 97-319 .....	137
C. Claim 2 .....	138
D. Claim 3 .....	140
E. Claim 4 .....	141
F. Claim 5 .....	145
G. Claim 6 .....	149

H. Claim 6 Motivation to combine the 1995 ADSL Standard, 97-161R1 and 97-319 .....	156
I. Claim 7 .....	157
J. Claim 8 .....	158
K. Claim 9 .....	159
L. Claim 10 .....	160
M. Claim 11 .....	161
N. Claim 11 Motivation to combine the 1995 ADSL Standard, 97-161R1 and 97-319 .....	164
O. Claims 12 - 15 .....	164
P. Claim 16 .....	165
Q. Claim 16 Motivation to combine the 1995 ADSL Standard, 97-161R1 and 97-319 .....	167
R. Claims 17 and 18.....	167
S. Claim 19 .....	168
T. Claim 20 .....	171

I, Lance McNally, hereby declare and state as follows:

1. I have been retained as a technical expert on behalf of ARRIS Inc., the petitioner in the present proceeding, to provide technical assistance in the above-captioned *inter partes* review. This declaration is a statement of my opinions on issues related to the unpatentability of claims 1-20 of U.S. Patent No. 8,612,404 (“the ‘404 Patent”).

**I. Background and Qualifications**

2. I have been asked to provide assistance, if needed, to the Patent Trial and Appeal Board of the United States Patent and Trademark Office in its consideration of the ‘404 Patent and the references that are cited in support of the petition for *inter partes* review of the ‘404 Patent. I am being compensated for my time at \$105.00 per hour, which is not dependent upon the outcome of this *inter partes* review or any related litigation.
3. My qualifications are stated more fully in my curriculum vita, which is attached to this declaration. A brief summary of my qualifications follows:
4. I am currently a principal of Harbor Falls, Inc., a consulting firm specializing in computer, data networking and telecommunication technical expertise applied to patents. Previously, I served as Vice President of Engineering at OPVISTA, Inc.; Director of Engineering at Bay/Nortel Networks, Inc., in the area of data and telecommunication systems; and

# 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.