

01-29-2004



Form PTO-1595

(Rev. 03/01)

OMB No. 0651-0027 (exp. 5/31/2002)

 102656501  
**PATENTS ONLY**

 U.S. DEPARTMENT OF COMMERCE  
 U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof

## 1. Name of conveying party(ies):

Metawave Communications Corporation

1-23-04

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

## 3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: September 19, 2003

## 2. Name and address of receiving party(ies)

Name: Kathrein-Werke KG

Internal Address:

Street Address:

 Antonkathrein Strasse 1-3  
 P. O. Box 100444 ED-83 004

City: Rosenheim

State: Germany

Zip:

Additional name(s) &amp; address(es) attached:

☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the new application is:

A. Patent Application No.(s):

09/930,523

B. Patent No.(s):

 Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: R. Ross Viguet

FULBRIGHT &amp; JAWORSKI L.L.P.

Internal Address: Atty. Dkt.: 65948-G99999-10313881

Street Address:

2200 Ross Avenue, Suite 2800

 City:  
 Dallas

 State:  
 TX

 Zip:  
 75201-2784

## 6. Total number of applications and patents involved:

## 7. Total fee (37 CFR 3.41)

\$ 40.00

☐ Enclosed☒ Authorized to be charged to deposit account
☐ Authorized to be charged to credit card  
 (Form 2038 enclosed)

## 8. Deposit account number:

06-2380

(Attach duplicate copy of this page if paying by deposit account)

**DO NOT USE THIS SPACE**

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

R. Ross Viguet

Name of Person Signing

Signature

January 21, 2004

Date

Total number of pages including cover sheet, attachments, and documents: 9

**Recordation Form Cover Sheet**

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS Assignment Recordation Services, Director of the US Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: January 21, 2004

Signature:

(Carrie Wilson)

01/28/2004 ECDOPER 00000209 062380 09930523

01 FC:8021 25375773.1

**PATENT**  
**REEL: 014915 FRAME: 0253**

## ASSIGNMENT

This Assignment ("Assignment") is made and entered into as of the 19th day of September, 2003, by Metawave Communications Corporation, a corporation organized and existing under the laws of the State of Delaware, having its principal place of business at 15231 NE 95<sup>th</sup> Street, Redmond, Washington 98052 ("Assignor") and Kathrein-Werke KG, a corporation organized and existing under the laws of the Federal Republic of Germany, having its principal place of business at Antonkathrein Strasse 1-3, P.O. Box 100444 ED-83 004 Rosenheim, Germany ("Buyer").

### RECITALS

A. Assignor is a debtor in Chapter 11 Bankruptcy Case 03-11272 pending before the United States Bankruptcy Court for the Western District of Washington (the "Court").

B. Assignor is operating its business as a debtor-in-possession pursuant to Section 1107 of the Bankruptcy Code;

C. Assignor and Buyer are parties to that certain Asset Purchase And Sale Agreement (the "Purchase Agreement") dated as of June 27, 2003.

D. Pursuant to that certain Order (A) Authorizing Sale of Certain Intellectual Property Assets Pursuant to Bankruptcy Code Section 363(B), and (B) Approving Overbid And Auction Procedures dated July 25, 2003 (the "Order") the Court authorized the Assignor to consummate the transactions contemplated by the Purchase Agreement (as amended pursuant to the Order).

E. Subject to the limitations set forth in the Purchase Agreement, Assignor owns or may assert a claim to all or to a portion of the worldwide right, title, and interest in and to the following (hereinafter the "Acquired Patent Assets"):

- (a) the patents and patent applications listed on Exhibit A hereto and the corresponding provisional applications and other parent applications, if any, and all continuations, continuations-in-part, divisionals, reissues, reexaminations and the like in the United States and all patents, patent applications, utility model applications, registrations and the like in other countries worldwide that correspond to any of them, including at least, but not necessarily being limited to, the patents and patent applications listed on Exhibit B hereto, where a patent, patent application, utility model, registration or the like in a foreign country corresponds to a U.S. patent application or patent if either (i) it claims the priority benefit of the filing date of the U.S. patent application or (ii) it was filed by or for Assignor or a person or entity affiliated with Assignor and claims or discloses the same invention as the U.S. patent application or patent (the "Patents");
- (b) the worldwide right to claim domestic and international priority to any and all of the aforesaid patents, patent applications, utility model applications, registrations and the like;
- (c) the patentable inventions of Assignor disclosed or claimed in any of the aforesaid patents, patent applications, utility model applications, registrations and the like;
- (d) the worldwide right (but not the obligation) to prosecute any or all of the aforesaid applications, registrations and the like; and
- (e) the worldwide right (but not the obligation) to enforce any or all of the aforesaid patents, patent applications, utility model applications, registrations and the like, and collect and retain for itself damages, if any, for infringement by any third parties which infringement occurred prior to or after the date hereof.

C. Pursuant to the terms of the Purchase Agreement, Assignor desires to transfer all of its claims, right, title and interest worldwide to any and all of the Acquired Patent Assets to Buyer, and Buyer desires to secure same.

NOW, THEREFORE, in consideration of \$10.00 and other good and valuable consideration paid to Assignor by Buyer, the receipt and sufficiency of which Assignor hereby acknowledges:

1. Assignment. Assignor hereby assigns to Buyer its entire claim, right, title, and interest worldwide in and to the *Acquired Patent Assets* and any and all portions and parts thereof. Buyer hereby receives and accepts from Assignor such claim, right, title, and interest worldwide in and to the *Acquired Patent Assets* and any and all portions thereof.

2. Miscellaneous

2.1 Assignor hereby authorizes and requests the United States Commissioner of Patents, and such patent office officials in any and all other countries worldwide as are duly authorized by their applicable laws to issue any and all patents on the inventions which are claimed or disclosed in the *Acquired Patent Assets* (the "*Inventions*") to Buyer as the owner of Assignor's entire claim, right, title, and interest worldwide in and to the *Acquired Patent Assets* and any and all portions and parts thereof for the sole use and benefit of Buyer, its successors, assigns and legal representatives.

2.2 Assignor hereby agrees, without further consideration and without expense to it, to sign all lawful papers and to perform all other lawful acts which Buyer may request to make this assignment fully effective, including, by way of example but not of limitation, the following:

(a) Prompt execution of all original, continuation, continuation-in-part, divisional, substitute, reissue, re-examination and other United States and foreign patent applications on the *Inventions*, and all lawful documents requested by Buyer to further the prosecution of any of the patents, patent applications, utility model applications, registrations and the like of the *Acquired Patent Assets*; and

(b) Cooperation to the best of its ability in the execution of all lawful documents, the production of evidence, and the prosecution or defense, as the case may be, of nullification, reissue, extension, interference or infringement proceedings involving any of the *Inventions*.

2.3 No party hereto shall be deemed to be the representative, partner, joint-venturer, or agent of any other party hereto by virtue of this Assignment; provided, however, that in the event Assignor is unwilling, unable or unavailable to sign lawful papers or to perform other lawful acts pursuant to section 2.2 of this Assignment to make this Assignment effective for the *Acquired Patent Assets* or any portion or part thereof in any country, Assignor hereby irrevocably and permanently appoints and authorizes Buyer to sign such papers and to perform such other lawful acts as and on behalf of Assignor worldwide to the extent doing so is not unlawful under applicable laws of such jurisdiction.

2.4 This Assignment may be amended, modified, superseded, canceled, renewed, or extended and the terms and conditions hereof may be waived only by a written instrument signed by the parties or, in the case of a waiver, by the party waiving compliance.

2.5 This Assignment shall be governed by and construed in accordance with United States federal law and with the laws of the State of Washington without regard to its choice of law provisions.

2.6 In the event that any condition, covenant, or other provision herein contained is held to be invalid or unenforceable by any court of competent jurisdiction, the same shall be deemed severable from the remainder of this Assignment and shall in no way affect any other covenant, condition or other provision herein contained. If such condition, covenant or other provision shall be deemed

ASSIGNMENT

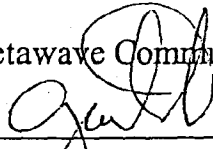
Page 2 of 3

PATENT  
REEL: 014915 FRAME: 0255

invalid or unenforceable due to its scope or breadth, such condition, covenant or other provision shall be deemed valid to the extent of the scope or breadth permitted by law.

IN WITNESS WHEREOF Assignor and Buyer each has hereunto set its hand:

Metawave Communications Corporation

  
\_\_\_\_\_  
Signature

Gary S. Flood  
\_\_\_\_\_  
Typed or printed name

Chief Executive Officer  
\_\_\_\_\_  
Title

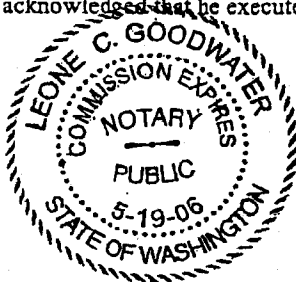
Sept 19, 2003  
\_\_\_\_\_  
Date

STATE OF WASHINGTON )

ss.

COUNTY OF KING )

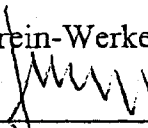
On this 19th day of September, 2003, personally appeared before me GARY S. FLOOD, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to on this Assignment, and acknowledged that he executed the same.



  
\_\_\_\_\_  
NOTARY PUBLIC, Residing at:

Renton, Wa  
\_\_\_\_\_

Kathrein-Werke KG

  
\_\_\_\_\_  
Signature

ppa Alois Trepesch ppa Harald Haroldt  
\_\_\_\_\_  
Typed or printed name

Managing Director, Financial Director  
\_\_\_\_\_  
Title

Dec 8, 2003  
\_\_\_\_\_  
Date

ASSIGNMENT

Page 3 of 3

I hereby certify, that the above are the true signatures, acknowledged in my presence by

Mr. Alois Trepesch,  
and Mr. Harald Maroldt,  
Germany, 83022 Rosenheim, Anton-Kathrein-Str. 3,  
their identity having confirmed to me by Mrs. Gabriele Dobler, employee at this office, who is personally known to me.

Upon my inspection of the commercial register on December the 8th of 2003, i further certify that

**Kathrein-Werke KG**  
**in Rosenheim**

is registered with the municipal Court of Traunstein-Commercial Register, No HRA 460 and that Mr. Trepesch and Mr. Maroldt are entitled to act as this company's legal representatives.

Rosenheim, on December the 8<sup>th</sup> of 2003



Thomas Hagmaier, substitute deputy of  
Dr. Sebastian Spiegelberger, notary public,  
Kufsteiner Str. 9/II, 83022 Rosenheim

## EXHIBIT A of ASSIGNMENT

## UNITED STATES PATENTS AND PATENT APPLICATIONS

| Metawave Patent ID | Status | Patent/<br>Application No. | Patent/Application Title   |
|--------------------|--------|----------------------------|--|
| D001US             | Issued | D390,566                   | Multiple Beam Antenna (Design Cylinder)  |
| D002US             | Issued | D390,568                   | Multiple Beam Antenna (Design Hexagon)   |
| D003US             | Issued | D390,569                   | Multiple Beam Antenna (Design Dodecagon)   |
| P001C1             | Issued | 5,757,318                  | Narrow Beam Wireless Systems with Angularly Diverse Antennas   |
| P001C1CP1          | Issued | 6,005,516                  | Diversity Among Narrow Antenna Beams   |
| P001C1CP1CP1       | Issued | 6,351,237                  | Polarization and Angular Diversity Among Antenna Beams   |
| P001CP1            | Issued | 5,648,968                  | Narrow Beam Antenna Systems with Angular Diversity   |
| P001US             | Issued | 5,563,610                  | Narrow Beam Antenna Systems with Angular Diversity   |
| P002US             | Issued | 5,859,854                  | System and Method for Frequency Multiplexing Antenna Signals   |
| P003US             | Issued | 5,884,147                  | Method and Apparatus for Improved Control Over Cellular Systems  |
| P004C1             | Issued | 6,032,056                  | Cellular System Signal Conditioner   |
| P004US             | Issued | 5,781,864                  | Cellular System Conditioner Which Overrides a Disconnect for Active Radios Wirelessly Communicating with Mobiles Located in Pre-Identified Territorial Positions |
| P005US             | Issued | 5,745,841                  | System and Method for Cellular Beam Spectrum Management  |
| P006CP2            | Issued | 5,872,547                  | Conical Omni-Directional Coverage Multibeam Antenna with Parasitic Elements  |
| P006CP3            | Issued | 6,094,166                  | Conical Omni-Directional Coverage Multiple-Beam Antenna with Parasitic Elements  |
| P006CP3CP1         | Issued | 6,188,373                  | System and Method for Per Beam Elevation Scanning  |
| P006D1             | Issued | 6,172,654                  | Conical Omni-Directional Coverage Multibeam Antenna  |
| P006US             | Issued | 5,940,048                  | Conical Omni-Directional Coverage Multibeam Antenna  |
| P007US             | Issued | 6,072,788                  | Forward Link TDMA Power Control System and Method  |
| P010CP1            | Issued | 6,246,674                  | Antenna Deployment Sector Cell Shaping System and Method   |
| P010CP2            | Issued | 6,198,435                  | System and Method for Improved Trunking Efficiency Through Sector Overlap  |
| P010US             | Issued | 5,889,494                  | Antenna Deployment Sector Cell Shaping System and Method   |
| P011US             | Issued | 5,969,689                  | Multi-Sector Pivotal Antenna System and Method   |
| P012US             | Issued | 5,929,823                  | Multiple Beam Planar Array with Parasitic Elements   |
| P013US             | Issued | 6,363,263                  | Universal Wideband Switchless Channel Selector   |
| P014D1             | Issued | 6,236,849                  | System and Method of Determining a Mobile Station's Position Using Directable Beams  |
| P014US             | Issued | 6,195,556                  | System and Method of Determining a Mobile Station's Position Using Directable Beams  |
| P015US             | Issued | 5,955,920                  | Signal Feed Matrix LPA Reduction System and Method   |
| P017US             | Issued | 6,061,548                  | TDMA Repeater Eliminating Feedback   |
| P018US             | Issued | 5,917,371                  | Signal Feed Matrix Amplifier Reduction System and Method   |
| P019US             | Issued | 6,055,230                  | Embedded Digital Beam Switching  |
| P020US             | Issued | 6,070,090                  | Input Specific Independent Sector Mapping  |
| P021US             | Issued | 6,141,565                  | Dynamic Mobile Parameter Optimization  |
| P022US             | Issued | 6,118,767                  | Interference Control for CDMA Networks Using a Plurality of Narrow Antenna Beams and an Estimation of the Number of Users/Remote Signals Present                 |

| Metawave<br>Patent ID | Status | Patent/<br>Application No. | Patent/Application Title   |
|-----------------------|--------|----------------------------|--|
| P023US                | Issued | 6,133,868                  | System and Method for Fully Self-Contained Calibration of an Antenna Array                         |
| P024US                | Issued | 6,178,333                  | System and Method Providing Delays for CDMA Nulling  |
| P025US                | Issued | 6,181,276                  | Sector Shaping Transition System and Method  |
| P026US                | Issued | 6,320,540                  | Establishing Remote Beam Forming Reference Line  |
| P028US                | Issued | 6,405,018                  | Indoor Distributed Microcell   |
| P029US                | Issued | 6,243,038                  | System and Method Providing Amplification of Narrow Band Signals with Multi-Channel Amplifiers     |
| P030US                | Issued | 6,522,897                  | RF Radiation Pattern Synthesis Using Existing Linear Amplifiers                                    |
| P031US                | Issued | 6,515,616                  | System and Method for Aligning Signals Having Different Phases                                     |
| P032US                | Issued | 6,198,434                  | Dual Mode Switched Beam Antenna  |
| P033US                | Issued | 6,268,828                  | Cylindrical Antenna Coherent Feed System and Method  |
| P034US                | Issued | 6,356,166                  | Multi-Layer Switched Line Phase Shifter  |
| P035US                | Issued | 6,317,100                  | Planar Antenna Array with Parasitic Elements Providing Multiple Beams of Varying Widths            |
| P038US                | Issued | 6,463,303                  | Beam Forming and Switching Architecture  |
| P042US                | Issued | 6,429,825                  | Cavity Slot Antenna  |
| P047US                | Issued | 6,320,853                  | Method of Phase Recovery in Cellular Communication Systems   |
| P049CP1               | Issued | 6,347,234                  | Practical Space-Time Radio Method For CDMA Communication Capacity Enhancement                      |
| P049CP1CP2            | Issued | 6,519,478                  | Compact Dual-Polarized Adaptive Antenna Array Communication Method and Apparatus                   |
| P049US                | Issued | 6,108,565                  | Practical Space-Time Radio Method for CDMA Communication Capacity Enhancement                      |
| P051US                | Issued | 6,233,466                  | Downlink Beamforming Using Beam Sweeping and Subscriber Feedback                                   |
| P054US                | Issued | 6,330,460                  | Simultaneous Forward Link Beam Forming and Learning Method for Mobile High Rate Data Traffic       |
| P058US                | Issued | 6,501,747                  | Manifold Assisted Channel Estimation and Demodulation for CDMA Systems in Fast Fading Environments |
| P059US                | Issued | 6,453,177                  | Transmitting Beam Forming in Smart Antenna Array System  |
| P061US                | Issued | 6,323,823                  | Base Station Clustered Adaptive Antenna Array  |
|                       |        |                            |  |
|                       |        |                            |  |
|                       |        |                            |  |

**REDACTED**

|        |         |            |   |
|--------|---------|------------|---|
| P056US | Pending | 09/930,523 | Dynamic and Self-Optimizing Smart Network |
|--------|---------|------------|---|

| Metawave<br>Patent ID | Status | Patent/<br>Application No. | Patent/Application Title |
|-----------------------|--------|----------------------------|--------------------------|
| <b>REDACTED</b>       |        |                            |                          |

EXHIBIT A of ASSIGNMENT  
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