

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	Asset Purchase Agreement										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Harman Becker Automotive Systems GmbH</td> <td>05/01/2009</td> </tr> </tbody> </table>		Name	Execution Date	Harman Becker Automotive Systems GmbH	05/01/2009						
Name	Execution Date										
Harman Becker Automotive Systems GmbH	05/01/2009										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>Nuance Communications, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>1 Wayside Road, Suite 100</td> </tr> <tr> <td>City:</td> <td>Burlington</td> </tr> <tr> <td>State/Country:</td> <td>MASSACHUSETTS</td> </tr> <tr> <td>Postal Code:</td> <td>01803-4613</td> </tr> </table>		Name:	Nuance Communications, Inc.	Street Address:	1 Wayside Road, Suite 100	City:	Burlington	State/Country:	MASSACHUSETTS	Postal Code:	01803-4613
Name:	Nuance Communications, Inc.										
Street Address:	1 Wayside Road, Suite 100										
City:	Burlington										
State/Country:	MASSACHUSETTS										
Postal Code:	01803-4613										
PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13478941</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13478941						
Property Type	Number										
Application Number:	13478941										
CORRESPONDENCE DATA											
Fax Number:	6174430004										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	617-443-9292										
Email:	dderamo@sunsteinlaw.com										
Correspondent Name:	John J. Stickevers										
Address Line 1:	125 Summer Street										
Address Line 2:	Sunstein Kann Murphy & Timbers LLP										
Address Line 4:	Boston, MASSACHUSETTS 02110										
ATTORNEY DOCKET NUMBER:	2639A/A51										
NAME OF SUBMITTER:	John J. Stickevers										
Signature:	/John J. Stickevers, #39,387/										
Date:	04/05/2013										
Total Attachments: 182											

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ASSET PURCHASE AGREEMENT

by and among

NUANCE COMMUNICATIONS, INC.

and

HARMAN BECKER AUTOMOTIVE SYSTEMS GmbH

Dated May 1, 2009

ASSET PURCHASE AGREEMENT

THIS ASSET PURCHASE AGREEMENT (this "Agreement") is made and entered into as of May 1, 2009 (the "Effective Date"), by and between Nuance Communications, Inc., a Delaware corporation, with a place of business at 1 Wayside Way, Burlington, MA 01803 (the "Buyer") and Harman Becker Automotive Systems GmbH, a German limited liability corporation, with a place of business at Becker-Göring-Straße 16, 76307 Karlsbad, Germany (the "Seller"), (each a "Party," together, the "Parties").

RECITALS

WHEREAS, the Seller is a wholly owned Subsidiary of Harman International Industries, Incorporated;

WHEREAS, Buyer wishes to purchase certain assets, tangible and intangible (other than certain excluded assets), of Seller used for the Business;

WHEREAS, Seller wishes to sell such assets to Buyer;

NOW, THEREFORE, in consideration of the covenants, promises, representations and warranties set forth herein, and for other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by the Parties), intending to be legally bound hereby, the Parties agree as follows:

ARTICLE 1 **DEFINITIONS**

The following capitalized terms shall have the meanings set forth below:

1.2 "Assigned IPR" means (a) the Assigned Patents,

1.4 "Assigned Patents" means each of the Patents set forth (subject to the provisions in Section 7.5) in Schedule 1.4 and any Patents that are a member of the same Patent Family as any one of such scheduled Patents, in each case whether pending, issued, expired, abandoned or closed, and all foreign counterparts of any such Patent.

1.8 "Closing Date" means the date upon which the Closing occurs in accordance with Section 4.1.

1.9 "Closing" has the meaning set forth in Section 4.1.

1.40 "Patent Family" means a set comprised of all Patents that are (a) directly or indirectly linked or entitled to be linked through one or more Priority Claim or by a terminal disclaimer (including under 35 U.S.C. Sec. 253 or 37 CFR 1.321 or the equivalent laws or regulation of any other patent authority) or (b) that are foreign counterparts, reissues, divisionals, renewals, extensions, continuations or continuations-in-part with respect to any other Patent in such set.

1.45 "Priority Claim" means a claim to priority made in any Patent or Patent application to any other Patent or Patent application pursuant to 35 U.S.C. Secs. 120 or 119(e) or the equivalent claim to priority under the laws and regulations applicable to a foreign Patent or Patent application, as the case may be.

ARTICLE 2
SALE, TRANSFER AND ASSIGNMENT OF ASSETS

2.1 Transfer of Assets. Effective as of the Closing Date, Seller hereby agrees to sell and, with effect as of Closing, conveys, transfers and assigns to Buyer, and as set forth below at the Closing Date to the Designated Subsidiary, and the Buyer agrees to purchase all rights, title, interest and attached advantages in and to the following assets (the "Transferred Assets"):

9.8 Intellectual Property Rights.

(a) Schedules. All schedules referenced in this Section 9.8 are complete and accurate in all material respects.

(b) Assigned IPR.

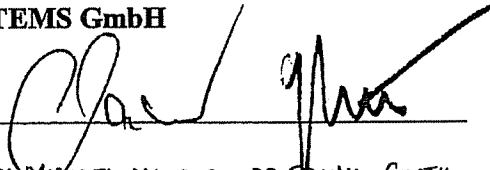
(i) Schedule 1.4 lists all Transferred Assets that are Registered IP, including the Assigned Patents.

(d) Ownership. Seller owns (or co-owns, where such co-ownership is explicitly indicated on Schedule 1.4) and has the right to transfer ownership to Buyer of all Assigned IPR free and clear of all Liens. Following Closing Buyer will own exclusively (except as explicitly indicated on Schedule 1.4) such Assigned IPR. Without limiting the scope of the foregoing representation and warranty, to the Knowledge of the Seller, no other person has registered or applied to register in any country any Intellectual Property Right of the Seller or claimed to be owned by the Seller. All of the Intellectual Property Rights therein and thereto, if a creative work, were created by an employee of Seller within the scope of that employee's employment such that ownership of and all Intellectual Property Rights in and to such work is vested in Seller.


Seller has taken all steps that are reasonably required to protect Seller's rights in confidential information. Seller has not transferred ownership of or, granted any exclusive licenses to, any Intellectual Property Rights of Seller otherwise required to be transferred to Buyer as a Transferred Asset.

IN WITNESS WHEREOF, the Parties, by their duly authorized representatives, have executed this Agreement as of the date first written above.

**HARMAN BECKER AUTOMOTIVE
SYSTEMS GmbH**

By: 
Name: MICHAEL MANSER ~~DR. FRANK GROTH~~
Title: MANAGING DIRECTOR ~~VP LEGAL~~

NUANCE COMMUNICATIONS, INC.

By: 
Name: THOMAS BEAUDOIN
Title: CHIEF FINANCIAL OFFICER

Invention Data

Friday, May 01, 2009

Page: 1

**Title: Method For Noise Reduction With Self-Controlled
Perturbation Frequency**

Priority Date: 14-Apr-2001

Country: Germany

Inventors:

Buck, Markus
Haulick, Tim Dr.
Linhard, Klaus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Granted	10118653.3-53	14-Apr-2001	10118653	27-Mar-2003
EP		ORD	Converted	02008011.5	10-Apr-2002	1251493	16-Aug-2006
JP		ORD	Published	2002-108951	11-Apr-2002		
US		ORD	Granted	10/121,180	12-Apr-2002	7,020,291	28-Mar-2006
FR	EP	EPC	Granted	02008011.5	10-Apr-2002	1251493	16-Aug-2006
GB	EP	EPC	Granted	02008011.5	10-Apr-2002	1251493	16-Aug-2006
IT	EP	EPC	Granted	02008011.5	10-Apr-2002	1251493	16-Aug-2006
DE	EP	EPC	Granted	02008011.5	10-Apr-2002	1251493	16-Aug-2006

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0025

Invention Data

Friday, May 01, 2009

Page: 3

Title: Handsfree System For Use In A Vehicle

Priority Date: 01-Oct-2003

Country: European Patent Convention

Inventors:

Christoph, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	03022273.1	01-Oct-2003		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0026

Invention Data

Friday, May 01, 2009

Page: 4

Title: Microphone Array With Downstream Beam Former For

Priority Date: 30-Jun-2003

Country: European Patent Convention

Inventors:

Christoph, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	03014846.4	30-Jun-2003		
WO		ORD	Converted	PCT/EP2004/0071	30-Jun-2004		
US		PCT	Published	10/563,072	30-Jun-2004		
US	P	CIP	Pending	11/701,629	02-Feb-2007		

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PATENT
REEL: 030174 FRAME: 0027

Invention Data

Friday, May 01, 2009

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Title: Multi Channel Noise Reduction For Automobiles

Priority Date:

Country: European Patent Convention

Inventors:

Christoph, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	03022273.1	01-Oct-2003		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0028

Invention Data

Friday, May 01, 2009

Page: 6

Title: Self Calibration For Microphone Arrays At Multi-Channel-Signal-Processing

Priority Date: 13-May-2003

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	03009852.9	13-May-2003	1478208	07-Jan-2009
WO		ORD	Pending	PCT/EP04/005147	13-May-2004		
US	P	PCT	Published	11/271,503	12-Nov-2005		
EP	WO	PCT	Pending	04732580.8	13-May-2004		
DE		EPC	Granted	03009852.9	13-May-2003	1478208	07-Jan-2009
FR		EPC	Granted	03009852.9	13-May-2003	1478208	07-Jan-2009
GB		EPC	Granted	03009852.9	13-May-2003	1478208	07-Jan-2009

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PATENT
REEL: 030174 FRAME: 0030

Invention Data

Friday, May 01, 2009

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Title: Method For Speech Assistance In Vehicle Interiors

Priority Date: 09-May-2003

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	03010490.5	09-May-2003		
EP	U1	ORD	Abandoned	03010913.6	15-May-2003		
WO		ORD	Pending	PCT/EP04/004980	10-May-2004		
US		PCT	Pending	10/556,232	10-May-2004		
EP	WO	PCT	Published	04731921.5	10-May-2004		
US	P	CIP	Published	11/924,987	26-Oct-2007		

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PATENT
REEL: 030174 FRAME: 0031

Invention Data

Friday, May 01, 2009

Page: 9

Title: Speech Input Interface

Priority Date: 12-Nov-2002

Country: Germany

Inventors:

Haulick, Tim Dr.
Birk, Christian
Linhard, Klaus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Abandoned	10252457	12-Nov-2002		
WO		ORD	Published	PCT/EP03/12660	12-Nov-2003		
EP		PCT	Pending	03775347.2	12-Nov-2003		
US		PCT	Abandoned	10/534,764	12-May-2005		
US	P	CIP	Abandoned	11/860,194	24-Sep-2007		

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PATENT
REEL: 030174 FRAME: 0032

Invention Data

Friday, May 01, 2009

Page: 10

Title: Satellite Communication System

Priority Date: 12-Nov-2002

Country: Germany

Inventors:

Birk, Christian
Haulick, Tim Dr.
Linhard, Klaus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Pending	10252456	12-Nov-2002		
WO		ORD	Pending		12-Nov-2003		

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PATENT
REEL: 030174 FRAME: 0033

Invention Data

Friday, May 01, 2009

Page: 11

Title: Multi Channel System For Wind Noise Suppression

Priority Date: 17-Mar-2004

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Pending	04006445.3	17-Mar-2004		
CA		ORD	Pending	2,497,859	21-Feb-2005		
US		ORD	Pending	11/083,190	17-Mar-2005		
CN		ORD	Published	200510055432.3	17-Mar-2005		
JP		ORD	Published	2005-75919	16-Mar-2005		
KR		ORD	Pending	10-2005-0022226	17-Mar-2005		

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PATENT
REEL: 030174 FRAME: 0035

Invention Data

Friday, May 01, 2009

Page: 13

Title: Bandwidth Extension Of Bandlimited Audio Signals

Priority Date: 17-Sep-2004

Country: European Patent Convention

Inventors:

Schmidt, Gerhard Uwe Dr.
Iser, Bernd

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0036

Invention Data

Friday, May 01, 2009

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<u>Country</u>	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	04022198.8	17-Sep-2004	1638083	22-Apr-2009
DE		EPC	Granted	04022198.8	17-Sep-2004	1638083	22-Apr-2009
FR		EPC	Granted	04022198.8	17-Sep-2004	1638083	22-Apr-2009
GB		EPC	Granted	04022198.8	17-Sep-2004	1638083	22-Apr-2009
US		ORD	Published	11/229,027	16-Sep-2005		
CA		ORD	Pending	2518332	07-Sep-2005		
CN		ORD	Pending	200510103342.7	16-Sep-2005		
JP		ORD	Published	2005-267713	14-Sep-2005		
KR		ORD	Pending	10-2005-0085829	14-Sep-2005		

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PATENT
REEL: 030174 FRAME: 0037

Invention Data

Friday, May 01, 2009

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Title: Beamforming Algorithm For Arbitrary Microphone Arrays

Priority Date: 23-Sep-2004

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.
Hetherington, Phillip Alan
Zakarauskas, Pierre

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PATENT
REEL: 030174 FRAME: 0038

Invention Data

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<u>Country</u>	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Converted	04022677.1	23-Sep-2004	1640971	20-Aug-2008
US		ORD	Published	11/234,837	23-Sep-2005		
CA		ORD	Pending	2,518,684	09-Sep-2005		
CN		ORD	Pending	200510105526.7	23-Sep-2005		
JP		ORD	Published	2005-276909	22-Sep-2005		
KR		ORD	Pending	10-2005-0088728	23-Sep-2005		
DE		EPC	Granted	04022677.1	23-Sep-2004	1640971	20-Aug-2008
FR		EPC	Granted	04022677.1	23-Sep-2004	1640971	20-Aug-2008
GB		EPC	Granted	04022677.1	23-Sep-2004	1640971	20-Aug-2008
IT		EPC	Granted	04022677.1	23-Sep-2004	1640971	20-Aug-2008

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REEL: 030174 FRAME: 0039

Invention Data

Friday, May 01, 2009

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Title: Speech Signal Processing With Combined Noise Reduction

Priority Date: 03-Sep-2004

Country: European Patent Convention

Inventors:

Kellermann, Walter
Herbordt, Wolfgang

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PATENT
REEL: 030174 FRAME: 0040

Invention Data

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<u>Country</u>	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	04021055.1	03-Sep-2004	1633121	05-Nov-2008
US		ORD	Published	11/218,687	02-Sep-2005		
CA		ORD	Pending	2,518,134	02-Sep-2005		
CN		ORD	Pending	200510116012.1	03-Sep-2005		
JP		ORD	Pending	2005-255760	02-Sep-2005		
KR		ORD	Pending	10-2005-0081874	02-Sep-2005		
DE		EPC	Granted	04021055.1	03-Sep-2004	1633121	05-Nov-2008
FR		EPC	Granted	04021055.1	03-Sep-2004	1633121	05-Nov-2008
GB		EPC	Granted	04021055.1	03-Sep-2004	1633121	05-Nov-2008
IT		EPC	Granted	04021055.1	03-Sep-2004	1633121	05-Nov-2008

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PATENT
REEL: 030174 FRAME: 0041

Invention Data

Friday, May 01, 2009

Page: 19

Title: System For Limiting Receive Audio

Priority Date: 14-Dec-2004

Country: United States of America

Inventors:

Schmidt, Gerhard Uwe Dr.
Haulick, Tim Dr.
Chu, Clarence
Giesbrecht, David

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
US		ORD	Published	11/012079	14-Dec-2004		
KR		ORD	Pending	10-2005-0123072	14-Dec-2005		
JP		ORD	Published	2005-357794	12-Dec-2005		
EP		ORD	Published	05027407.5	14-Dec-2005		
CN		ORD	Published	2005-10134335.3	14-Dec-2005		
CA		ORD	Pending	2529593	07-Dec-2005		

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PATENT
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Friday, May 01, 2009

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**Title: Equalization Of Loudspeaker-Room-Monitoring System In
The Received Signal Of Free Speech Mechanisms**

Priority Date: 19-May-2006

Country: European Patent Convention

Inventors:

Schmidt, Gerhard Uwe Dr.

Haulick, Tim Dr.

Buck, Markus

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Published	06010399.1	19-May-2006		
JP		ORD	Published	2007-97268	03-Apr-2007		
US		ORD	Published	11/749,678	16-May-2007		

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PATENT
REEL: 030174 FRAME: 0044

Invention Data

Friday, May 01, 2009

Page: 22

**Title: Method For Estimating The Power Densely Spectrum Of The
Background Noise Without Detectives Speech Activity**

Priority Date:

Country: European Patent Convention

Inventors:

Christoph, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Unfiled				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0045

Invention Data

Friday, May 01, 2009

Page: 23

Title: Automatic Recognition And Classification Of Motor Vehicle

Priority Date: 14-Mar-2005

Country: European Patent Convention

Inventors:

Schmidt, Gerhard Uwe Dr.
Buck, Markus
Haulick, Tim Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Published	05005509.4	14-Mar-2005		
US		ORD	Published	11/376,001	14-Mar-2006		

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PATENT
REEL: 030174 FRAME: 0046

Invention Data

Friday, May 01, 2009

Page: 24

Title: Suppression Of Feedbacks In Systems For Speech Improvement

Priority Date: 11-Jan-2005

Country: European Patent Convention

Inventors:

Schmidt, Gerhard Uwe Dr.
Haulick, Tim Dr.
Lenhardt, Harald

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	05000404.3	11-Jan-2005	1679874	21-May-2008
WO		ORD	Published	PCT/EP2006/0001	09-Jan-2006		
US		PCT	Published	11/775,687	09-Jan-2006		
US	P	CIP	Abandoned	11/867,124	04-Oct-2007		
DE		EPC	Granted	05000404.3	11-Jan-2005	1679874	21-May-2008
FR		EPC	Granted	05000404.3	11-Jan-2005	1679874	21-May-2008
GB		EPC	Granted	05000404.3	11-Jan-2005	1679874	21-May-2008
IT		EPC	Granted	05000404.3	11-Jan-2005	1679874	21-May-2008

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REEL: 030174 FRAME: 0047

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PATENT
REEL: 030174 FRAME: 0048

Invention Data

Friday, May 01, 2009

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**Title: Bandwith Expansion Of Speech Signals Based On Code Books
And Interpolation**

Priority Date: 31-Jan-2005

Country: European Patent Convention

Inventors:

Iser, Bernd
Schmidt, Gerhard Uwe Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Granted	05001959.5	31-Jan-2005	1686564	15-Apr-2009
US		ORD	Published	11/343,938	31-Jan-2006		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0049

Invention Data

Friday, May 01, 2009

Page: 27

Title: Echo Cancellation For Vehicle Passenger Communication

Priority Date: 11-Jul-2006

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Schmidt, Gerhard Uwe Dr.
Lenhardt, Harald

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06014366.6	11-Jul-2006		
US		ORD	Published	11/776,432	11-Jul-2007		
JP		ORD	Published	2007-154363	11-Jun-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0050

Invention Data

Friday, May 01, 2009

Page: 28

Title: Multi Channel Echo Compensation Using Multiple Reference

Priority Date: 10-May-2006

Country: European Patent Convention

Inventors:

Schmidt, Gerhard Uwe Dr.
Haulick, Tim Dr.
Buck, Markus
Roessler, Martin
Koepl, Hans-Joerg

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06009692.2	10-May-2006		
JP		ORD	Published	2007-106374	13-Apr-2007		
US		ORD	Published	11/789,798	25-Apr-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0051

Invention Data

Friday, May 01, 2009

Page: 29

**Title: System For Detection And Suppression Of Wind Disturbances
With A Double Microphone**

Priority Date: 29-Apr-2005

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Buck, Markus
Hetherington, Phillip Alan
Haindl, Klaus Alois

CONFIDENTIAL

**PATENT
REEL: 030174 FRAME: 0052**

Invention Data

Friday, May 01, 2009

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<u>Country</u>	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	05009470.5	29-Apr-2005		
WO		ORD	Converted	PCT/EP2006/0012	13-Feb-2006		
CA		PCT	Abandoned	2603870	13-Feb-2006		
CN		PCT	Abandoned	200680014539.6	13-Feb-2006		
KR		PCT	Abandoned	10-2007-7026947	13-Feb-2006		
JP		PCT	Abandoned	2008-508091	13-Feb-2006		
US		PCT	Pending	11/925,323	13-Feb-2006		

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PATENT
REEL: 030174 FRAME: 0053

Invention Data

Friday, May 01, 2009

Page: 31

**Title: Method For Enhancing The Speech And Communication
Quality In Passenger Compartments**

Priority Date: 28-Jul-2005

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.
Schmidt, Gerhard Uwe Dr.
Tropp, Michael

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Granted	05016443.3	28-Jul-2005	1748636	19-Nov-2008
US		ORD	Published	11/492,675	25-Jul-2006		
DE		EPC	Granted	05016443.3	28-Jul-2005	1748636	19-Nov-2008
FR		EPC	Granted	05016443.3	28-Jul-2005	1748636	19-Nov-2008
GB		EPC	Granted	05016443.3	28-Jul-2005	1748636	19-Nov-2008
IT		EPC	Granted	05016443.3	28-Jul-2005	1748636	19-Nov-2008

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PATENT
REEL: 030174 FRAME: 0054

Invention Data

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PATENT
REEL: 030174 FRAME: 0055

Invention Data

Friday, May 01, 2009

Page: 33

**Title: Joint Method For Bandwidth Extension Of Telephone
Bandlimited Speech Signals And For Reconstruction For
Heavily Distorted Speech Signals**

Priority Date: 07-Oct-2005

Country: European Patent Convention

Inventors:

Iser, Bernd
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
US		ORD	Published	11/544,470	06-Oct-2006		
EP		ORD	Published	05021934.4	07-Oct-2005		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0056

Invention Data

Friday, May 01, 2009

Page: 34

Title: Noise Suppression With Compact Microphones Array

Priority Date: 01-Mar-2006

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.
Roessler, Martin

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Published	06004158.9	01-Mar-2006		
JP		ORD	Published	2007-26914	06-Feb-2007		
US		ORD	Abandoned	11/679,695	27-Feb-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0057

Invention Data

Friday, May 01, 2009

Page: 35

Title: Method For Multi-Channel Echo Suppression

Priority Date: 18-Apr-2006

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.
Schmidt, Gerhard Uwe Dr.
Roessler, Martin

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Granted	06008006.6	18-Apr-2006	1848243	18-Feb-2009
US		ORD	Published	11/787,348	16-Apr-2007		
JP		ORD	Published	2007-77953	23-Mar-2007		
DE		EPC	Granted	06008006.6	18-Apr-2006	1848243	18-Feb-2009
FR		EPC	Granted	06008006.6	18-Apr-2006	1848243	18-Feb-2009
GB		EPC	Granted	06008006.6	18-Apr-2006	1848243	18-Feb-2009

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PATENT
REEL: 030174 FRAME: 0058

Invention Data

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PATENT
REEL: 030174 FRAME: 0059

Invention Data

Friday, May 01, 2009

Page: 37

Title: Method For Suppressing Wind noise With A Microphone

Priority Date:

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Unfiled				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0060

Invention Data

Friday, May 01, 2009

Page: 38

Title: Method For Sychone And Asynchrone Sample Rate

Priority Date: 24-Jan-2006

Country: European Patent Convention

Inventors:

Roessler, Martin
Schmidt, Gerhard Uwe Dr.
Krini, Mohamed

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06001452.9	24-Jan-2006		
US		ORD	Abandoned	11/657,408	24-Jan-2007		
JP		ORD	Published	2007-14341	24-Jan-2007		
US	C	CON	Published	11/855,575	14-Sep-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0061

Invention Data

Friday, May 01, 2009

Page: 39

**Title: Method For Low Frequency Extension Of Telephone Band
Limited Speech Signals**

Priority Date: 31-Jan-2006

Country: European Patent Convention

Inventors:

Iser, Bernd
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06001984.1	31-Jan-2006		
US		ORD	Pending	11/701,184	31-Jan-2007		
JP		ORD	Published	2007-18580	29-Jan-2007		

Invention Data

Friday, May 01, 2009

Page: 40

Title: Sturdy Speech Recognition In Vehicle Environments

Priority Date: 21-Aug-2006

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Buck, Markus
Koepf, Hans-Joerg

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	06016382.1	04-Aug-2006	1884421	08-Oct-2008
US		ORD	Pending	11/834,591	06-Aug-2007		
JP		ORD	Published	2007-203664	03-Aug-2007		
DE		EPC	Granted	06016382.1	04-Aug-2006	1884421	08-Oct-2008
FR		EPC	Granted	06016382.1	04-Aug-2006	1884421	08-Oct-2008
GB		EPC	Granted	06016382.1	04-Aug-2006	1884421	08-Oct-2008
IT		EPC	Granted	06016382.1	04-Aug-2006	1884421	08-Oct-2008

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0063

Invention Data

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CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0064

Invention Data

Friday, May 01, 2009

Page: 42

**Title: Method For Echo Suppression In Time-Variant Loudspeaker-
Enclosure-Microphone Systems**

Priority Date: 08-May-2006

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Roessler, Martin
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06009468.7	08-May-2006		
JP		ORD	Published	2007-86051	28-Mar-2007		
US		ORD	Published	11/788,069	18-Apr-2007		

Invention Data

Friday, May 01, 2009

Page: 43

**Title: Method for Extending The Bandwidth Of Bandlimited Speech
Sginals Using Adaptive Codebooks**

Priority Date: 22-Aug-2006

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Iser, Bernd
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06017456.2	22-Aug-2006		
CA		ORD	Pending	2596411	08-Aug-2007		
CN		ORD	Published	200710146610.2	22-Aug-2007		
US		ORD	Abandoned	11/843,437	22-Aug-2007		
JP		ORD	Published	2007-214930	21-Aug-2007		
KR		ORD	Pending	10-2007-0084306	22-Aug-2007		

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PATENT
REEL: 030174 FRAME: 0066

Invention Data

Friday, May 01, 2009

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PATENT
REEL: 030174 FRAME: 0067

Invention Data

Friday, May 01, 2009

Page: 45

Title: Method For Cancellation Of Background Noise In Hands-Free

Priority Date: 10-Jul-2006

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Roessler, Martin
Haindl, Klaus Alois

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Published	06014256.9	10-Jul-2006		
JP		ORD	Published	2007-125506	10-May-2007		
US		ORD	Published	11/767,803	26-Jun-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0068

Invention Data

Friday, May 01, 2009

Page: 46

Title: Microphone Positioning For Robust Speech Recognition

Priority Date: 02-Oct-2006

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.

Buck, Markus

Hennecke, Marcus Dr.

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PATENT
REEL: 030174 FRAME: 0069

Invention Data

Friday, May 01, 2009

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Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	06020730.5	02-Oct-2006	1908640	04-Mar-2009
US		ORD	Pending	11/865,930	02-Oct-2007		
CA		ORD	Pending	2,604,301	26-Sep-2007		
CN		ORD	Published	200710162302.9	30-Sep-2007		
JP		ORD	Published	2007-252502	27-Sep-2007		
KR		ORD	Pending	10-2007-0099023	02-Oct-2007		
DE		EPC	Granted	06020730.5	02-Oct-2006	1908640	04-Mar-2009
FR		EPC	Granted	06020730.5	02-Oct-2006	1908640	04-Mar-2009
GB		EPC	Granted	06020730.5	02-Oct-2006	1908640	04-Mar-2009

Invention Data

01, 2009

Page: 48

Title: System For Dereverberation Of Microphone Signals

Priority Date: 01-Aug-2006

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06016029.8	01-Aug-2006		
US		ORD	Published	11/832,445	01-Aug-2007		

Invention Data

Friday, May 01, 2009

Page: 49

Title: Method For Spectral Refinement

Priority Date: 01-Dec-2006

Country: European Patent Convention

Inventors:

Krini, Mohamed
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06024940.6	01-Dec-2006		
US		ORD	Published	11/948,137	30-Nov-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0072

Invention Data

Friday, May 01, 2009

Page: 50

Title: Method For Model-Based Speech Enhancement

Priority Date: 31-Oct-2006

Country: European Patent Convention

Inventors:

Krini, Mohamed
Schmidt, Gerhard Uwe Dr.
Gossenberger, Andreas

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	06022704.8	31-Oct-2006	1918910	11-Mar-2009
JP		ORD	Published	2007-281799	30-Oct-2007		
US		ORD	Published	11/928,251	30-Oct-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0073

Invention Data

Friday, May 01, 2009

Page: 51

**Title: Method For Complexity Reduction In Multirate Systems By
Usage Of Partial Reconstruction Of Subbands**

Priority Date: 01-Oct-2007

Country: European Patent Convention

Inventors:

Wirsching, Guenther Professor
Schmidt, Gerhard Uwe Dr.
Koeopf, Hans-Joerg

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07019281.0	01-Oct-2007		
US		ORD	Pending	12/241,788	30-Sep-2008		

Invention Data

Friday, May 01, 2009

Page: 52

**Title: Method For Low-Delay-Frequency Extension Of Telephone
Bandlimited Speech Signals**

Priority Date: 18-Jan-2007

Country: European Patent Convention

Inventors:

Iser, Bernd
Nuessle, Gerhard
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07001062.4	18-Jan-2007		
CA		ORD	Pending	2618316	04-Jan-2008		
CN		ORD	Published	200810003073.0	18-Jan-2008		
KR		ORD	Pending	10-2008-0004822	16-Jan-2008		
JP		ORD	Published	2008-8552	17-Jan-2008		
US		ORD	Published	12/015,907	17-Jan-2008		

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PATENT
REEL: 030174 FRAME: 0075

Invention Data

Friday, May 01, 2009

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PATENT
REEL: 030174 FRAME: 0076

Invention Data

Friday, May 01, 2009

Page: 54

Title: Method For Low Complexity Echo Cancellation

Priority Date: 18-Dec-2006

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.
Roessler, Martin
Schmidt, Gerhard Uwe Dr.
Schnug, Walter

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06026232.6	18-Dec-2006		
CA		ORD	Pending	2,610,940	19-Nov-2007		
CN		ORD	Published	200710160830.0	18-Dec-2007		
JP		ORD	Published	2007-317760	07-Dec-2007		
KR		ORD	Pending	10-2007-0127399	10-Dec-2007		
US		ORD	Published	11/955,862	13-Dec-2007		

Invention Data

Friday, May 01, 2009

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CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0078

Invention Data

Friday, May 01, 2009

Page: 56

Title: Method For Fundamental Frequency Estimation Of Speech

Priority Date: 12-Jan-2007

Country: European Patent Convention

Inventors:

Krini, Mohamed
Schmidt, Gerhard Uwe Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Published	07000568.1	12-Jan-2007		
US		ORD	Abandoned	12/013,955	14-Jan-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0079

Invention Data

Friday, May 01, 2009

Page: 57

Title: Passiv Acoustic Speaker Localization With Microphones Array

Priority Date: 17-Apr-2007

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Schmidt, Gerhard Uwe Dr.
Buck, Markus
Wolff, Tobias

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07007817.5	17-Apr-2007		
US		ORD	Published	12/104,836	17-Apr-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0080

Invention Data

Friday, May 01, 2009

Page: 58

**Title: Optimized Method For The Training And Usage Of A
Codebook Containing Parametric Representations Of The
Spectral Envelope Of Telephone Bandlimited Speech Signals**

Priority Date: 14-Mar-2007

Country: European Patent Convention

Inventors:

Iser, Bernd
Schmidt, Gerhard Uwe Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Published	07005313.7	14-Mar-2007		
US		ORD	Published	12/047,874	13-Mar-2008		

Invention Data

Friday, May 01, 2009

Page: 59

**Title: Method For Combined Signal Enhancement In Intercom
System And In Karaoke Systems For Cars**

Priority Date: 16-Jul-2007

Country: European Patent Convention

Inventors:

Schmidt, Gerhard Uwe Dr.
Haulick, Tim Dr.
Hoff, Viola

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07013893.8	16-Jul-2007		
US		ORD	Pending	12/174,595	16-Jul-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0082

Invention Data

Friday, May 01, 2009

Page: 60

**Title: Efficient Combination Of Echocancellation And GSC-Type
Beamforming**

Priority Date: 22-May-2007

Country: European Patent Convention

Inventors:

Wolff, Tobias
Buck, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07010160.5	22-May-2007		
US		ORD	Published	12/125,298	22-May-2008		

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PATENT
REEL: 030174 FRAME: 0083

Invention Data

Friday, May 01, 2009

Page: 61

**Title: Method For Enhanced Noise Suppression With Adaptive
Adjustment Of The Maximum Attenuation**

Priority Date: 21-May-2007

Country: European Patent Convention

Inventors:

Brueckner, Raymond
Buck, Markus
Krini, Mohamed
Schmidt, Gerhard Uwe Dr.
Tchinda-Pockem, Ange

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07010091.2	21-May-2007		
US		ORD	Published	12/118,205	09-May-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0084

Invention Data

Friday, May 01, 2009

Page: 62

**Title: Fast Estimation Of Spectral Noise Power Density For Speech
Signal Enhancement**

Priority Date: 31-Aug-2007

Country: European Patent Convention

Inventors:

Wolff, Tobias
Schmidt, Gerhard Uwe Dr.
Buck, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07017134.3	31-Aug-2007		
US		ORD	Pending	12/202,147	29-Aug-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0085

Invention Data

Friday, May 01, 2009

Page: 63

Title: Robust Echo Suppression Using Virsual Information

Priority Date:

Country: European Patent Convention

Inventors:

Buck, Markus
Haulick, Tim Dr.
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Unfiled				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0086

Invention Data

Friday, May 01, 2009

Page: 64

Title: Spatial Postfiltering For Beamforming Microphone Arrays

Priority Date: 13-Aug-2007

Country: European Patent Convention

Inventors:

Wolff, Tobias
Buck, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07015908.2	13-Aug-2007		
CA		ORD	Pending	2,638,469	06-Aug-2008		
CN		ORD	Pending	200810147385.9	13-Aug-2008		
KR		ORD	Pending	10/2008-0079261	13-Aug-2008		
JP		ORD	Published	2008-207519	11-Aug-2008		
US		ORD	Published	12/189,545	11-Aug-2008		

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PATENT
REEL: 030174 FRAME: 0087

Invention Data

Friday, May 01, 2009

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PATENT
REEL: 030174 FRAME: 0088

Invention Data

Friday, May 01, 2009

Page: 66

**Title: Speaker-Specific Speech Enhancement By Partial Speech
Signal Reconstruction**

Priority Date: 29-Oct-2007

Country: European Patent Convention

Inventors:

Gerl, Franz S. Dr.
Herbig, Tobias
Krini, Mohamed
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07021121.4	29-Oct-2007		
US		ORD	Pending	12/254,488	20-Oct-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0089

Invention Data

Friday, May 01, 2009

Page: 67

Title: Method For Local Noise Dependent Receive Side Processing

Priority Date: 08-Oct-2007

Country: European Patent Convention

Inventors:

Schmidt, Gerhard Uwe Dr.
Iser, Bernd

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07019652.2	08-Oct-2007		
US		ORD	Pending	12/246,994	07-Oct-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0090

Invention Data

Friday, May 01, 2009

Page: 68

Title: System For Dereverberation Of Speech Signals

Priority Date: 31-Oct-2007

Country: European Patent Convention

Inventors:

Buck, Markus
Wolf, Arthur

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07021334.3	31-Oct-2007		
US		ORD	Pending	12/263,227	31-Oct-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0091

Invention Data

Friday, May 01, 2009

Page: 69

Title: Method For Enhancement Of Speech Signals

Priority Date: 12-Nov-2007

Country: European Patent Convention

Inventors:

Krini, Mohamed
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07021932.4	12-Nov-2007		
US		ORD	Pending	12/269,605	12-Nov-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0092

Invention Data

Friday, May 01, 2009

Page: 70

**Title: Modelbased Segmentation For Separation Of Foreground
Speakers And Background Noise**

Priority Date: 12-Nov-2007

Country: European Patent Convention

Inventors:

Gerl, Franz S. Dr.
Herbig, Tobias
Gaupp, Oliver

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07021933.2	12-Nov-2007		
US		ORD	Pending	12/269,837	12-Nov-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0093

Invention Data

Friday, May 01, 2009

Page: 71

Title: Speaker Location Using Nested Microphone Array

Priority Date: 20-Nov-2007

Country: European Patent Convention

Inventors:

Wolff, Tobias
Buck, Markus
Schmidt, Gerhard Uwe Dr.
Wirsching, Guenther Professor
Gonzales-Valbuena, Olga

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Pending	07022602.2	20-Nov-2007		
WO		ORD	Pending	PCT/EP2008/0097	17-Nov-2008		

Invention Data

Friday, May 01, 2009

Page: 72

Title: Speech Enhancement By Partial Speech Signal Reconstruction

Priority Date:

Country: European Patent Convention

Inventors:

Krini, Mohamed
Schmidt, Gerhard Uwe Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Unfiled				

Invention Data

Friday, May 01, 2009

Page: 73

**Title: Improved Speech Quality In Hand-Free Systems Due To
Receive Side Filtering**

Priority Date:

Country: European Patent Convention

Inventors:

Buck, Markus
Schmidt, Gerhard Uwe Dr.
Iser, Bernd
Nongpiur, Rajeev
Paranjpe, Shreyas A

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Unfiled				

Invention Data

Friday, May 01, 2009

Page: 74

Title: Training And Operation Of A Spatial Postfilter For

Priority Date: 17-Jan-2008

Country: European Patent Convention

Inventors:

Buck, Markus
Scheufele, Klaus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08000870.9	17-Jan-2008		
US		ORD	Pending	12/357,258	21-Jan-2009		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0097

Invention Data

Friday, May 01, 2009

Page: 75

**Title: Incorporating User-Preferred Signal -to-Noise Ratio (SNR)
Level in the Adaptive Equalization Algorithm**

Priority Date:

Country: United States of America

Inventors:

Nongpiur, Rajeev
Iser, Bernd
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
US		ORD	On Hold				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0098

Invention Data

Friday, May 01, 2009

Page: 76

Title: Method For Codec-Optimized Speech Enhancement

Priority Date: 07-Aug-2008

Country: European Patent Convention

Inventors:

Krini, Mohamed
Haulick, Tim Dr.
Schmidt, Gerhard Uwe Dr.
Paranjpe, Shreyas A

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08014151.8	07-Aug-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0099

Invention Data

Friday, May 01, 2009

Page: 77

Title: Robust Speaker Localization Using Beamforming As A

Priority Date: 16-Jul-2008

Country: European Patent Convention

Inventors:

Wolff, Tobias
Buck, Markus
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08012866.3	16-Jul-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0100

Invention Data

Friday, May 01, 2009

Page: 78

**Title: Method For Combined Signal Enhancement In Hands-Free
And Intercom Systems**

Priority Date: 07-Aug-2008

Country: European Patent Convention

Inventors:

Haulick, Tim Dr.
Iser, Bernd
Schmidt, Gerhard Uwe Dr.
Wolf, Arthur

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08014157.5	07-Aug-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0101

Invention Data

Friday, May 01, 2009

Page: 79

Title: Modified MUSIC-Algorithm For Nested Microphone Arrays

Priority Date: 26-Aug-2008

Country: European Patent Convention

Inventors:

Wolff, Tobias
Buck, Markus
Schmidt, Gerhard Uwe Dr.
Wirsching, Guenther Professor
Gonzales-Valbuena, Olga

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08015055.0	26-Aug-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0102

Invention Data

Friday, May 01, 2009

Page: 80

Title: Frequency Band Weight Adaption (FBWA)

Priority Date: 03-Sep-2008

Country: European Patent Convention

Inventors:

Herbig, Tobias
Brueckner, Raymond
Raab, Martin
Gruhn, Rainer

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08015561.7	03-Sep-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0103

Invention Data

Friday, May 01, 2009

Page: 81

**Title: Method For Efficient Combination Of Echo Cancellation And
Beamforming With Time Variant Steering Direction**

Priority Date: 23-Feb-2009

Country: European Patent Convention

Inventors:

Buck, Markus
Schmidt, Gerhard Uwe Dr.
Wolff, Tobias

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	09002542.0	23-Feb-2009		

Invention Data

Friday, May 01, 2009

Page: 82

Title: System For Multi-Channel Noise Reduction With Localization

Priority Date: 12-Dec-2008

Country: European Patent Convention

Inventors:

Buck, Markus
Wolff, Tobias
Schmidt, Gerhard Uwe Dr.
Haulick, Tim Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08021682.3	12-Dec-2008		

Invention Data

Friday, May 01, 2009

Page: 83

3

Title: Method For Fundamental Frequency Estimation Of Speech

Priority Date:

Country: European Patent Convention

Inventors:

Krini, Mohamed
Schmidt, Gerhard Uwe Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Unfiled				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0106

Invention Data

Friday, May 01, 2009

Page: 84

Title: Enhanced Determination Of Singal Coherence

Priority Date: 12-Dec-2008

Country: European Patent Convention

Inventors:

Buck, Markus
Mathejo, Timo

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Pending	08021674.0	12-Dec-2008		

Invention Data

Friday, May 01, 2009

Page: 85

Title: Method For Avoiding Residual Echo Artifacts Due to Time-Variant Beamsteering Of A Beamformer (BF) With Subsequent Echo Cancellation Filter (EC-Filter)

Priority Date:

Country: European Patent Convention

Inventors:

Buck, Markus
Schmidt, Gerhard Uwe Dr.
Wolff, Tobias

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Unfiled				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0108

Invention Data

Friday, May 01, 2009

Page: 86

Title: Generation Of Blocking Signals For A Microphone Array

Priority Date: 30-Mar-2009

Country: European Patent Convention

Inventors:

Buck, Markus
Wolff, Tobias
Lawin-Ore, Toby Christian
Ngouoko Mboungueng, Samuel

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	09004609.5	30-Mar-2009		

Invention Data

Friday, May 01, 2009

Page: 87

**Title: Multichannel Speech Enhancement System For Noicy And
Reverberant Speech Signals**

Priority Date: 31-Mar-2009

Country: European Patent Convention

Inventors:

Wolff, Tobias
Buck, Markus
Lawin-Ore, Toby Christian

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending		31-Mar-2009		

Invention Data

Friday, May 01, 2009

Page: 88

Title: Method For Estimating Propagation Times Of Noisy Speech

Priority Date: 23-Dec-1992

Country: Germany

Inventors:

Linhard, Klaus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
US		ORD	Granted	08/171,472	23-Dec-1993	5479517	26-Dec-1995
DE		EPC	Granted	59309463.8-08	11-Dec-1993	0612059	17-Mar-1999
GB		EPC	Granted	93120010.9	11-Dec-1993	0612059	17-Mar-1999
FR		EPC	Granted	93120010.9-2215	11-Dec-1993	0612059	17-Mar-1999

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0111

Invention Data

Friday, May 01, 2009

Page: 89

Title: Noise Reduction Method For Disturbed Speech Channels

Priority Date: 11-Mar-1993

Country: Germany

Inventors:

Linhard, Klaus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
GB	EP	ORD	Granted	9410296392215	28-Feb-1994	0615226	06-May-1999
FR	EP	ORD	Granted	94102963.9	28-Feb-1994	0615226	06-May-1999
IT	EP	ORD	Granted	9410296392215	28-Feb-1994	0615226	06-May-1999
US		ORD	Granted	08/208,747	11-Mar-1994	5,400,409	21-Mar-1995
DE	EP	ORD	Granted	5908194.7-08	28-Feb-1994	0615226	06-May-1999
DE		ORD	Abandoned	4307688	11-Mar-1993		

Invention Data

Friday, May 01, 2009

Page: 90

Title: Method Reducing Noise In a Speech Signal

Priority Date: 15-Jun-1994

Country: Germany

Inventors:

Linhard, Klaus

Invention Data

Friday, May 01, 2009

Page: 91

<u>Country</u>	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Published	4420894	15-Jun-1994		
DE	EP	ORD	Granted	59508605.5-08	06-Jun-1995	0689190	02-Aug-2000
AT	EP	ORD	Granted	E195195	06-Jun-1995	0689190	02-Aug-2000
CH	EP	ORD	Granted	9510858772218	06-Jun-1995	0689190	02-Aug-2000
ES	EP	ORD	Granted	9510858772218	06-Jun-1995	0689190	02-Aug-2000
NL	EP	ORD	Granted	9510858772218	06-Jun-1995	0689190	02-Aug-2000
BE	EP	ORD	Granted	9510858772218	06-Jun-1995	0689190	02-Aug-2000
GB	EP	ORD	Granted	9510858772218	06-Jun-1995	0689190	02-Aug-2000
FR	EP	ORD	Granted	9510858772218	06-Jun-1995	0689190	02-Aug-2000
IT	EP	ORD	Granted	9510858772218	06-Jun-1995	0689190	02-Aug-2000
EP		ORD	Granted	95108587.7	06-Jun-1995	0689190 B1	02-Aug-2000

Invention Data

Friday, May 01, 2009

Page: 92

Title: Noise Reduction Method For A Disturbed Speech Signal

Priority Date: 23-Feb-1994

Country: Germany

Inventors:

Klemm, Heinz
Linhard, Klaus

Invention Data

Friday, May 01, 2009

Page: 93

<u>Country</u>	Sub	Case	Status	Application	Filing	Patent	Issue Date
AT	EP	ORD	Granted	950101977.7	14-Feb-1995	0669606	22-Sep-1999
CH	EP	ORD	Granted	95101977.7-2215	14-Feb-1995	0669606	22-Sep-1999
ES	EP	ORD	Granted	9510197772215	14-Feb-1995	0669606	22-Sep-1999
NL	EP	ORD	Granted	9510197772215	14-Feb-1995	0669606	22-Sep-1999
GB	EP	ORD	Granted	9510197772215	14-Feb-1995	0669606	22-Sep-1999
FR	EP	ORD	Granted	9510197772215	14-Feb-1995	0669606	22-Sep-1999
IT	EP	ORD	Granted	9510197772215	14-Feb-1995	0669606	22-Sep-1999
DE	EP	ORD	Granted	59506864.2-08	14-Feb-1995	0669606	22-Sep-1999
DE		ORD	Abandoned	4405723	23-Feb-1994		
EP		ORD	Converted	950101977.7	14-Feb-1995	0669606	22-Sep-1999

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0116

Invention Data

Friday, May 01, 2009

Page: 94

Title: Method For Reducing Noise In A Speech Signal

Priority Date: 19-Jul-1998

Country: Germany

Inventors:

Linhard, Klaus
Haulick, Tim Dr.
Schroegmeier, Peter

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0117

Invention Data

<u>Country</u>							
Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
AT		ORD	Granted	97930489.6	02-Jul-1997	E191806	12-Apr-2000
CH		ORD	Granted	9793048962215	02-Jul-1997	0912974	12-Apr-2000
DE		EPC	Granted	59701446.9-08	02-Jul-1997	0912974	12-Apr-2000
ES		ORD	Granted	9793048962215	02-Jul-1997	0912974	12-Apr-2000
FR		ORD	Granted	9793048962215	02-Jul-1997	0912974	12-Apr-2000
GB		ORD	Granted	9793048962215	02-Jul-1997	0912974	12-Apr-2000
IT		ORD	Granted	9793048962215	02-Jul-1997	0912974	12-Apr-2000
US	WO	PCT	Granted	09/214,910	02-Jul-1997	6,687,669	03-Feb-2004
JP		ORD	Granted	10-506481	02-Jul-1997	418779	19-Sep-2008
CA		ORD	Pending	2260893	02-Jul-1997		
EP		ORD	Granted	97930489.6	02-Jul-1997	0912974	12-Apr-2000
DE	WO	PCT	Abandoned	19629132	19-Jul-1996	19629132	

Assignment History

Assignment From	Assignment To	Assignmt	Reel	Fram
DaimlerChrysler AG	Harman Becker Automotive Systems GmbH	16-Jun-2004	014734	0665

Invention Data

Friday, May 01, 2009

Page: 96

**Title: Method For Reducing Noise In Acoustic Signals Using The
Adaptive Filter Method Of Spectral Subtraction**

Priority Date:

Country: United States of America

Inventors:

Haulick, Tim Dr.
Linhard, Klaus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
US		ORD	Granted	09/530527	22-Oct-1998	6643619	04-Nov-2003
DE		ORD	Pending	19747885.9	30-Oct-1997		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0119

Invention Data

Friday, May 01, 2009

Page: 97

Title: Method For Noise Cancellation In Microphone Signals

Priority Date: 03-Apr-1998

Country: Germany

Inventors:

Thomas, Hans-Jörg

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Pending	19814971.9	03-Apr-1998		
EP		ORD	Granted	99106123.5	01-Apr-1999	0948237	11-Jun-2008
US		ORD	Granted	09/285,064	02-Apr-1999	6,895,095	17-May-2005
DE	EP	EPC	Granted	99106123.5	01-Apr-1999	0948237	11-Jun-2008
FR		EPC	Granted	99106123.5	01-Apr-1999	0948237	11-Jun-2008
GB		EPC	Granted	99106123.5	01-Apr-1999	0948237	11-Jun-2008
IT		EPC	Granted	99106123.5	01-Apr-1999	0948237	11-Jun-2008

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PATENT
REEL: 030174 FRAME: 0120

Invention Data

Friday, May 01, 2009

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CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0121

Invention Data

Friday, May 01, 2009

Page: 1

Title: Method And System For Speech Recognition

Priority Date: 15-Jun-2001

Country: Germany

Inventors:

Nuessle, Gerhard
Enderle, Harald Bernd
Gerl, Franz S. Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Granted	10129005.5	15-Jun-2001	10129005	03-Nov-2005
US		ORD	Granted	10/324,737	18-Dec-2002	7,392,182	24-Jun-2008
WO		ORD	Pending	PCT/EP 02/05882	29-May-2002		
EP		PCT	Converted	02735393.7	29-May-2002	1395979	13-Dec-2006
FR		EPP	Granted °	02735393.7	29-May-2002	1395979	13-Dec-2006
GB		EPP	Granted	02735393.7	29-May-2002	1395979	13-Dec-2006
IT		EPP	Granted	02735393.7	29-May-2002	1395979	13-Dec-2006

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PATENT
REEL: 030174 FRAME: 0122

Invention Data

Friday, May 01, 2009

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PATENT
REEL: 030174 FRAME: 0123

Invention Data

Friday, May 01, 2009

Page: 3

Title: Incremental Matching Of Character Strings Using Database

Priority Date: 29-Jan-2003

Country: European Patent Convention

Inventors:

Rinscheid, Ansgar

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Converted	03002067.1	29-Jan-2003	1443494	11-Oct-2006
US		ORD	Granted	10/769,028	29-Jan-2004	7,460,995	02-Dec-2008
DE	EP	ORD	Granted	03002067.1	29-Jan-2003	1443494	11-Oct-2006
FR	EP	ORD	Granted	03002067.1	29-Jan-2003	1443494	11-Oct-2006
GB	EP	ORD	Granted	03002067.1	29-Jan-2003	1443494	11-Oct-2006
IT	EP	ORD	Granted	03002067.1	29-Jan-2003	1443494	11-Oct-2006

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0124

Invention Data

Friday, May 01, 2009

Page: 4

Title: Voice-Entry - Interface

Priority Date: 12-Nov-2002

Country: Germany

Inventors:

Haulick, Tim Dr.
Birk, Christian

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Abandoned	10252457.2	12-Nov-2002		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0125

Invention Data

Friday, May 01, 2009

Page: 5

Title: Speech Dialog With Possibility To Interrupt Voice Prompt

Priority Date: 30-Jun-2003

Country: European Patent Convention

Inventors:

Hennecke, Marcus Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Abandoned	03014845.6	30-Jun-2003		
WO		ORD	Published	PCT/EP2004/0071	30-Jun-2004		
US		PCT	Published	10/562,355	30-Jun-2004		
US	P	CIP	Published	11/932,355	31-Oct-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0126

Invention Data

Friday, May 01, 2009

Page: 6

Title: Proactive Speech Dialogue

Priority Date: 30-Jun-2003

Country: European Patent Convention

Inventors:

Koenig, Lars

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Abandoned	03014854.8	30-Jun-2003		
WO		ORD	Inactive	PCT/EP2004/0071	30-Jun-2004		
US		PCT	Published	10/562,354	27-Dec-2005		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0127

Invention Data

Friday, May 01, 2009

Page: 7

**Title: Speech Dialog System And Method For Controlling An
Electronic Device**

Priority Date: 06-Feb-2004

Country: European Patent Convention

Inventors:

Koenig, Lars

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	04002693.2	06-Feb-2004		
US		ORD	Pending	11/051,127	04-Feb-2005		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0128

Invention Data

Friday, May 01, 2009

Page: 8

Title: Speech Recognition From Sender Name And Address Book

Priority Date: 21-May-2004

Country: European Patent Convention

Inventors:

Jeschke, Baerbel
Gerl, Franz S. Dr.
Schwarz, Markus
Kosmala, Andreas
Schulz, Matthias

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	04012134.5	21-May-2004		
WO		ORD	Published	PCT/EP2005/0055	23-May-2005		
US		PCT	Published	11/603,265	21-Nov-2006		
JP		PCT	Published	2007-517102	23-May-2005		

Invention Data

Friday, May 01, 2009

Page: 9

Title: Undo Per Speech Dialogue

Priority Date:

Country: European Patent Convention

Inventors:

Koenig, Lars

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Closed				

Invention Data

Friday, May 01, 2009

Page: 10

**Title: Speech Dialog System For Dialog Interruption And
Continuation Control**

Priority Date: 29-Jan-2004

Country: European Patent Convention

Inventors:

Jeschke, Baerbel
Reh, Frank

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0131

Invention Data

Friday, May 01, 2009

Page: 11

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Granted	04001949.9	29-Jan-2004	1560200	26-Nov-2008
US		ORD	Granted	11/044,815	26-Jan-2005	7,454,351	18-Nov-2008
KR		ORD	Pending	10-2005-0008381	29-Jan-2005		
CA		ORD	Pending	2,494,795	27-Jan-2005		
CN		ORD	Pending	200510054220.3	31-Jan-2005		
JP		ORD	Published	2005-24580	31-Jan-2005		
DE		EPC	Granted	04001949.9	29-Jan-2004	1560200	26-Nov-2008
FR		EPC	Granted	04001949.9	29-Jan-2004	1560200	26-Nov-2008
GB		EPC	Granted	04001949.9	29-Jan-2004	1560200	26-Nov-2008
IT		EPC	Granted	04001949.9	29-Jan-2004	1560200	26-Nov-2008

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0132

Invention Data

Friday, May 01, 2009

Page: 12

Title: Sectored Multimodal Dialog

Priority Date: 15-Oct-2003

Country: European Patent Convention

Inventors:

Hennecke, Marcus Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Abandoned	03023515.4	15-Oct-2003		
US		ORD	Pending	10/966,781	15-Oct-2004		

Invention Data

Friday, May 01, 2009

Page: 13

Title: Method To Recognize Entries In Big Lists

Priority Date: 17-Jun-2005

Country: European Patent Convention

Inventors:

Hennecke, Marcus Dr.
Schless, Volker Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	05013168.9	17-Jun-2005		
US		ORD	Published	11/454,612	15-Jun-2006		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0134

Invention Data

Friday, May 01, 2009

Page: 14

Title: Integrated Speech Dialog System

Priority Date: 04-Aug-2005

Country: European Patent Convention

Inventors:

Schedl, Manfred

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	05016999.4	04-Aug-2005		
US		ORD	Published	11/499,139	03-Aug-2006		
CA		ORD	Pending	2551589	07-Jul-2006		
JP		ORD	Published	2006-195647	18-Jul-2006		
KR		ORD	Pending	10-2006-0073655	04-Aug-2006		
CN		ORD	Published	200610107879.5	27-Jul-2006		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0135

Invention Data

Friday, May 01, 2009

Page: 15

Title: Multi Lingual, Two-Step-Speech Recognition

Priority Date: 21-Feb-2005

Country: European Patent Convention

Inventors:

Krippgans, Thomas
Hennecke, Marcus Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Converted	05003670.6	21-Feb-2005	1693828	23-Jan-2008
US		ORD	Published	11/360024	21-Feb-2006		
IT		EPC	Granted	05003670.6	21-Feb-2005	1693828	23-Jan-2008
GB		EPC	Granted	05003670.6	21-Feb-2005	1693828	23-Jan-2008
FR		EPC	Granted	05003670.6	21-Feb-2005	1693828	23-Jan-2008
DE		EPC	Granted	05003670.6	21-Feb-2005	1693828	23-Jan-2008

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0136

Invention Data

Friday, May 01, 2009

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PATENT
REEL: 030174 FRAME: 0137

Invention Data

Friday, May 01, 2009

Page: 17

Title: Aligment Of State Sequences For Deviation Analysis And

Priority Date:

Country: European Patent Convention

Inventors:

Roemer, Ronald
Wirsching, Guenther Professor
Langer, Patrick
Schubert, Volker Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Unfiled				

Invention Data

Friday, May 01, 2009

Page: 18

Title: Adaptive Context Post-Recognition Processing For Improved Automatic Speech Recognition

Priority Date: 12-Oct-2006

Country: United States of America

Inventors:

Hetherington, Phillip Alan
Rempel, Rod
Willett, Daniel Dr.
Hennecke, Marcus Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
US		ORD	Published	11/865,443	01-Oct-2007		
US	V	PRO	Converted	60/851,149	12-Oct-2006		
CA	V	ORD	Pending	2606118	10-Oct-2007		
CN	V	ORD	Published	200710192999.4	11-Oct-2007		
JP	V	ORD	Published	2007-262683	05-Oct-2007		
KR	V	ORD	Pending	10-2007-0100295	05-Oct-2007		
EP	V	ORD	Published	07019549.0	05-Oct-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0139

Invention Data

Friday, May 01, 2009

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Invention Data

Friday, May 01, 2009

Page: 20

Title: Speech Recognition Based On Square-Root Discounting

Priority Date: 11-Aug-2006

Country: European Patent Convention

Inventors:

Wirsching, Guenther Professor

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06016867.1	11-Aug-2006		
US		ORD	Abandoned	11/837,218	10-Aug-2007		
CA		ORD	Pending	2596126	03-Aug-2007		
CN		ORD	Published	200710141821.7	13-Aug-2007		
JP		ORD	Published	2007-207243	08-Aug-2007		
KR		ORD	Pending	10-2007-0080486	10-Aug-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0141

Invention Data

Friday, May 01, 2009

Page: 21

**Title: Interactive Speech Recognition With Limited Vocabulary For
Each Navigation**

Priority Date: 30-Nov-2006

Country: European Patent Convention

Inventors:

Koenig, Lars
Saam, Rainer
Gossenberger, Andreas

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	06024859.8	30-Nov-2006	1939860	18-Mar-2009
CA		ORD	Pending	2610573	14-Nov-2007		
CN		ORD	Published	200710196357.1	30-Nov-2007		
JP		ORD	Published	2007-309186	29-Nov-2007		
KR		ORD	Pending	10-2007-0122463	29-Nov-2007		
US		ORD	Published	11/948,075	30-Nov-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0142

Invention Data

Friday, May 01, 2009

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PATENT
REEL: 030174 FRAME: 0143

Invention Data

Friday, May 01, 2009

Page: 23

Title: Multi-Stage Speech Recognition Engine

Priority Date: 21-Dec-2006

Country: European Patent Convention

Inventors:

Grill, Joachim
Loew, Andreas

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06026600.4	21-Dec-2006		
US		ORD	Published	11/957,883	17-Dec-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0144

Invention Data

Friday, May 01, 2009

Page: 24

Title: Multilingual, Non-Native Recognition On Large Lists

Priority Date: 28-Mar-2007

Country: European Patent Convention

Inventors:

Wirsching, Guenther Professor
Hennecke, Marcus Dr.
Willett, Daniel Dr.
Schwarz, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07105096.7	28-Mar-2007		
CA		ORD	Pending	2,626,651	20-Mar-2008		
CN		ORD	Published	200810086920.4	28-Mar-2008		
KR		ORD	Pending	10-2008-0028820	28-Mar-2008		
JP		ORD	Published	2008-84074	27-Mar-2008		
US		ORD	Abandoned	12/058,527	28-Mar-2008		

Invention Data

Friday, May 01, 2009

Page: 25

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0146

Invention Data

Friday, May 01, 2009

Page: 26

**Title: Speech Recognition System Including Preprocessor And
Dialog Controller**

Priority Date: 15-Dec-2006

Country: European Patent Convention

Inventors:

Koenig, Lars
Schmidt, Gerhard Uwe Dr.
Loew, Andreas

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Granted	06025974.4	14-Dec-2006	1933303	06-Aug-2008
US		ORD	Published	11/951,904	06-Dec-2007		
DE		EPC	Granted	06025974.4	14-Dec-2006	1933303	06-Aug-2008
FR		EPC	Granted	06025974.4	14-Dec-2006	1933303	06-Aug-2008
GB		EPC	Granted	06025974.4	14-Dec-2006	1933303	06-Aug-2008
IT		EPC	Granted	06025974.4	14-Dec-2006	1933303	06-Aug-2008

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0147

Invention Data

Friday, May 01, 2009

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Invention Data

Friday, May 01, 2009

Page: 28

Case Number: P07025

Count^r EP Divisio HBAS GmbH 425.351 (1055) Technology
Count^r US Divisio HBAS GmbH 425.351 (1055) Technology

Disclosure Filed Disclosure Date: 28-Sep-2006

Owner:

Attorney(s): KRAUS FB

Title: Speech Recognition System With Optimized Correction Mode

Priority Date: 12-Dec-2006 Country: European Patent Convention

Inventors:

Loew, Andreas
Koenig, Lars
Hillebrecht, Christian

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	06025726.8	12-Dec-2006		
US		ORD	Pending	11/955,233	12-Dec-2007		

User ID: tbast

Date Created: 12-Oct-2006

Last Update: 02-Feb-2009

Invention Data

Friday, May 01, 2009

Page: 29

Title: Activation Of A Speech Control Device

Priority Date: 02-Feb-2007

Country: European Patent Convention

Inventors:

Buck, Markus
Koenig, Lars
Schmidt, Gerhard Uwe Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07002342.9	02-Feb-2007		
JP		ORD	Published	2008-19878	30-Jan-2008		
US		ORD	Published	12/023,485	31-Jan-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0150

Invention Data

Friday, May 01, 2009

Page: 30

Title: Customized Multilingual Speech Recognition Engine

Priority Date:

Country: European Patent Convention

Inventors:

Reh, Frank
Jeschke, Baerbel

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Unfiled				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0151

Invention Data

Friday, May 01, 2009

Page: 31

**Title: Using A Verification Step To Improve Matching By Context
Sensitive Speech Units**

Priority Date: 08-Oct-2007

Country: European Patent Convention

Inventors:

Gerl, Franz S. Dr.
Hillebrecht, Christian
Roemer, Ronald
Schatz, Ulrich

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07019654.8	08-Oct-2007		
US		ORD	Pending	12/247,201	07-Oct-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0152

Invention Data

Friday, May 01, 2009

Page: 32

Title: An Algorithm Mapping Phonetic Descriptions To HMM Chains

Priority Date: 02-Nov-2007

Country: European Patent Convention

Inventors:

Wirsching, Guenther Professor
Koelbl, Christian

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Published	07021421.8	02-Nov-2007		
US		ORD	Pending	12/264,049	03-Nov-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0153

Invention Data

Friday, May 01, 2009

Page: 33

Title: Data Base Search Engine With Voice Control

Priority Date: 24-Oct-2007

Country: European Patent Convention

Inventors:

Koenig, Lars
Loew, Andreas
Haiber, Udo

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07020821.0	24-Oct-2007		
US		ORD	Pending	12/258,338	24-Oct-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0154

Invention Data

Friday, May 01, 2009

Page: 34

Title: Self Learning System For Speaker Identification

Priority Date: 10-Oct-2007

Country: European Patent Convention

Inventors:

Gerl, Franz S. Dr.

Herbig, Tobias

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Published	07019849.4	10-Oct-2007		
US		ORD	Pending	12/249,089	10-Oct-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0155

Invention Data

Friday, May 01, 2009

Page: 35

Title: Speech Dialog System With Variable Play-Back Of Prompts

Priority Date: 17-Oct-2007

Country: European Patent Convention

Inventors:

Buck, Markus
Schmidt, Gerhard Uwe Dr.
Haulick, Tim Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	07020295.7	17-Oct-2007		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0156

Invention Data

Friday, May 01, 2009

Page: 36

Title: Recognition On Very Large Lists

Priority Date: 16-Jan-2008

Country: European Patent Convention

Inventors:

Schwarz, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08000772.7	16-Jan-2008		
US		ORD	Pending	12/355,476	16-Jan-2009		
CN		ORD	Pending	200910002539..X	16-Jan-2009		
CA		ORD	Pending	2650141	16-Jan-2009		
JP		ORD	Pending	2009-3489	09-Jan-2009		
KR		ORD	Pending	10-2009-0002873	14-Jan-2009		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0157

Invention Data

Friday, May 01, 2009

Page: 37

**Title: Robust Speech Segmentation For Speech Dialog Systems With
Barg-In Functionality**

Priority Date: 31-Mar-2008

Country: European Patent Convention

Inventors:

Buck, Markus
Gerl, Franz S. Dr.
Haulick, Tim Dr.
Herbig, Tobias
Schmidt, Gerhard Uwe Dr.
Schulz, Matthias

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08006389.4	31-Mar-2008		
US		ORD	Pending	12/415,927	31-Mar-2009		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0158

Invention Data

Friday, May 01, 2009

Page: 38

Title: Model Based Segmentation With Barge-In Functionality

Priority Date: 22-Jul-2008

Country: European Patent Convention

Inventors:

Herbig, Tobias
Gerl, Franz S. Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Pending	08013196.4	22-Jul-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0159

Invention Data

Friday, May 01, 2009

Page: 39

Title: Multilingual Weighted Codebooks (MWCs)

Priority Date: 01-Apr-2008

Country: European Patent Convention

Inventors:

Raab, Martin
Brueckner, Raymond
Gruhn, Rainer

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08006690.5	01-Apr-2008		
US		ORD	Pending	12/416,768	01-Apr-2009		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0160

Invention Data

Friday, May 01, 2009

Page: 40

Title: Speaker Identification Via Bluetooth

Priority Date:

Country: European Patent Convention

Inventors:

Sablatnög, Stefan Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Closed				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0161

Invention Data

Friday, May 01, 2009

Page: 41

Title: Template-Based Dication Of Emails

Priority Date: 10-Dec-2008

Country: European Patent Convention

Inventors:

Gruhn, Rainer
Hamerich, Stefan

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Pending	08021450.5	10-Dec-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0162

Invention Data

Friday, May 01, 2009

Page: 42

Title: On the Fly Generation Of Multilingual Acoustic Model

Priority Date: 27-Nov-2008

Country: European Patent Convention

Inventors:

Raab, Martin
Gruhn, Rainer
Brueckner, Raymond

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08020639.4	27-Nov-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0163

Invention Data

Friday, May 01, 2009

Page: 43

Title: Recognition Of Partially And Permutedly Spoken List Entries

Priority Date: 19-Feb-2009

Country: European Patent Convention

Inventors:

Hillebrecht, Christian
Schwarz, Markus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	09002356.5	19-Feb-2009		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0164

Invention Data

Friday, May 01, 2009

Page: 44

**Title: Improved Speech Recognition By Longterm Speaker
Adaptation And Speaker Identification**

Priority Date: 21-Nov-2008

Country: European Patent Convention

Inventors:

Herbig, Tobias
Gerl, Franz S. Dr.

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	08020323,5	21-Nov-2008		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0165

Invention Data

Friday, May 01, 2009

Page: 45

Title: Large-Context Speech Recognition With Neural Networks

Priority Date: 20-Feb-2009

Country: European Patent Convention

Inventors:

Gruhn, Rainer
Vasquez, Daniel
Aradilla, Guillermo

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Pending	09002464.7	20-Feb-2009		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0166

Invention Data

Friday, May 01, 2009

Page: 46

**Title: Enhancement Of A Self Learning Identification System By
Posterior Probabilities**

Priority Date: 05-Feb-2009

Country: European Patent Convention

Inventors:

Herbig, Tobias
Gerl, Franz S. Dr.

Country

<u>Ctry</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
EP		ORD	Pending	09001624:7	05-Feb-2009		

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0167

Invention Data

Friday, May 01, 2009

Page: 47

Title: Method For Automatic Activitation Of In-Car Communication

Priority Date:

Country: European Patent Convention

Inventors:

Koenig, Lars
Schmidt, Gerhard Uwe Dr.
Wolf, Arthur

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Unfiled				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0168

Invention Data

Friday, May 01, 2009

Page: 48

Title: One Shot Speech Input On Multi Column Databases

Priority Date:

Country: European Patent Convention

Inventors:

Schwarz, Markus
Hillebrecht, Christian
Schulz, Matthias
Biedert, Marc

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
EP		ORD	Unfiled				

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0169

Invention Data

Friday, May 01, 2009

Page: 49

Title: Method For Fast Speech Adaptation

Priority Date: 11-Jul-1992

Country: Germany

Inventors:

Class, Fritz
Regel-Brietzmann, Peter
Trottler, Karl

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Granted	P4222916.2-09	11-Jul-1992	4222916	04-Oct-2001

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0170

Invention Data

Friday, May 01, 2009

Page: 50

**Title: Method For Speech Systems To Adapt To The Characteristics
Of Microphones And Speech**

Priority Date: 04-Sep-1992

Country: Germany

Inventors:

Class, Fritz
Kaltenmeier, Alfred
Regel-Brietzmann, Peter

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE	EP	ORD	Granted	93113800.2	28-Aug-1993	59309837.4	20-Oct-1999
GB	EP	ORD	Granted	9311380022212	28-Aug-1993	0586996	20-Oct-1999
FR	EP	ORD	Granted	9311380022212	28-Aug-1993	0586996	20-Oct-1999
IT	EP	ORD	Granted	93113800.2	28-Aug-1993	0586996	20-Oct-1999
DE		ORD	Abandoned	4229577.7	04-Sep-1992		
EP		ORD	Converted	93113800.2	28-Aug-1993	0586996	20-Oct-1999

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PATENT
REEL: 030174 FRAME: 0171

Invention Data

Friday, May 01, 2009

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PATENT
REEL: 030174 FRAME: 0172

Invention Data

Friday, May 01, 2009

Page: 52

Title: Method For Broad Speech Recognition

Priority Date:

Country: Germany

Inventors:

Linhard, Klaus

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Granted	P4420894.4-09	15-Jun-1994	4420894	23-Jan-1997

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0173

Invention Data

Friday, May 01, 2009

Page: 53

Title: Voice Interactive Automotive Systems Control

Priority Date:

Country:

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
US		ORD	Abandoned				

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PATENT
REEL: 030174 FRAME: 0174

Invention Data

Friday, May 01, 2009

Page: 54

Title: Method For Speech Recognition

Priority Date: 20-Jan-1995

Country: Germany

Inventors:

Class, Fritz
Kaltenmeier, Alfred
Kilian, Ute
Regel-Brietzmann, Peter

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE	EP	ORD	Abandoned	95941006.9	23-Nov-1995	0804788	12-Feb-2003
AT	EP	ORD	Granted	95941006.9	23-Nov-1995	0804788	12-Feb-2003
CH	EP	ORD	Granted	95941006.9-2218	23-Nov-1995	0804788	12-Feb-2003
DE		ORD	Granted	19501599.1	20-Jan-1995	19501599	02-May-1996
FR	EP	ORD	Granted	9594100692218	23-Nov-1995	0804788	12-Feb-2003
GB	EP	ORD	Granted	9594100692218	23-Nov-1995	0804788	12-Feb-2003
US		ORD	Granted	08/875,262	23-Nov-1995	6,023,677	08-Feb-2000
EP		ORD	Granted	95941006.9	23-Nov-1995	0804788	12-Feb-2003

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PATENT
REEL: 030174 FRAME: 0175

Invention Data

Friday, May 01, 2009

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PATENT
REEL: 030174 FRAME: 0176

Invention Data

Friday, May 01, 2009

Page: 56

**Title: Method For Recognizing Speech Signals And Apparatus For
Carrying Out The Method**

Priority Date: 19-May-1994

Country: Germany

Inventors:

Stolze, Anton

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
BE	EP	EPC	Granted	95919450.7	12-May-1995	0760151	20-Jan-1999
DE	EP	EPC	Granted	59504913.3-08	12-May-1995	0760151	20-Jan-1999
FR	EP	EPC	Granted	95919450.7	12-May-1995	0760151	20-Jan-1999
GB	EP	EPC	Granted	95919450.7	12-May-1995	0760151	20-Jan-1999
IT	EP	EPC	Granted	95919450.7	12-May-1995	0760151	20-Jan-1999
DE		ORD	Abandoned	4417557	19-May-1994		
EP		ORD	Converted	95919450:7	12-May-1995	0760151	20-Jan-1999

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0177

Invention Data

Friday, May 01, 2009

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Invention Data

Friday, May 01, 2009

Page: 58

**Title: Method For Automatic Control Of One Or More Devices By
Speech Commands Or By Speech Dialogue In Real-Time And
Apparatus For Carrying Out The Method**

Priority Date: 11-Sep-1995

Country: Germany

Inventors:

Class, Fritz
Moller, Carsten-Uwe
Nuessle, Gerhard
Reh, Frank
Buschkuhl, Burkard
Heinrich, Christian
Stammler, Walter

CONFIDENTIAL

**PATENT
REEL: 030174 FRAME: 0179**

Invention Data

Friday, May 01, 2009

Page: 59

<u>Country</u>	<u>Sub</u>	<u>Case</u>	<u>Status</u>	<u>Application</u>	<u>Filing</u>	<u>Patent</u>	<u>Issue Date</u>
DE		ORD	Granted	19533541.4-09	11-Sep-1995	19533541	27-Mar-1997
CA		ORD	Granted	2231504	09-Sep-1996	2231504	02-Aug-2005
CH	EP	ORD	Abandoned	9693248212212	09-Sep-1996	0852051	02-Jan-2002
DE	EP	ORD	Granted	9693248212212	09-Sep-1996	0852051	02-Jan-2002
ES	EP	ORD	Granted	9693248212212	09-Sep-1996	0852051	02-Jan-2002
FI	EP	ORD	Abandoned	9693248212212	09-Sep-1996	0852051	02-Jan-2002
FR	EP	ORD	Granted	9693248212212	09-Sep-1996	0852051	02-Jan-2002
GB	EP	ORD	Granted	9693248212212	09-Sep-1996	0852051	02-Jan-2002
IT	EP	ORD	Granted	9693248212212	09-Sep-1996	0852051	02-Jan-2002
SE	EP	ORD	Granted	9693248212212	09-Sep-1996	0852051	02-Jan-2002
JP		ORD	Granted	9-511639	09-Sep-1996	3479691	10-Oct-2003
US		ORD	Granted	09/043,134	09-Sep-1996	6,839,670	04-Jan-2005
EP		ORD	Converted	96932482.1	09-Sep-1996	0852051	02-Jan-2002
AT		ORD	Granted	96932482.1	09-Sep-1996	E211572	02-Jan-2002

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0180

Invention Data

Friday, May 01, 2009

Page: 60

Title: Method For Segmentation Of Voice Activity Detection

Priority Date:

Country: Germany

Inventors:

Scheppach, Frank

Country

Ctry	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		EPC	Abandoned	19625294.6	25-Jun-1996		
AT		EPC	Granted	9711016702218	21-Jun-1997	E239288	02-May-2003
CH		EPC	Granted	9711016702218	21-Jun-1997	00817167	02-May-2003
DE	1	EPC	Granted	97110167.0	21-Jun-1997	59709946.4	02-May-2003
DE	2	ORD	Pending	9711016702218	21-Jun-1997		
EP		ORD	Converted	9711016702218	21-Jun-1997	0817167	02-May-2003
ES		EPC	Abandoned	9711016702218	21-Jun-1997	0817167	02-May-2003
FR		EPC	Granted	9711016702218	21-Jun-1997	00817167	02-May-2003
GB		EPC	Granted	9711016702218	21-Jun-1997	00817167	02-May-2003
IT		EPC	Granted	9711016702218	21-Jun-1997	00817167	02-May-2003

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0181

Invention Data

Friday, May 01, 2009

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CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0182

Invention Data

Friday, May 01, 2009

Page: 62

Title: Method For Speech Recognition

Priority Date: 11-Dec-1997

Country: Germany

Inventors:

Class, Fritz
Kilian, Ute

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0183

Invention Data

Friday, May 01, 2009

Page: 63

<u>Country</u>	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Abandoned	19754957.8	11-Dec-1997		
AT		ORD	Granted	9896509732218	02-Dec-1998	1038293	19-Dec-2001
CH		ORD	Granted	9896509732218	02-Dec-1998	1038293	19-Dec-2001
DE	1	ORD	Granted	9896509732218	02-Dec-1998	1038293	19-Dec-2001
ES		ORD	Granted	9896509732218	02-Dec-1998	1038293	19-Dec-2001
FR		ORD	Granted	9896509732218	02-Dec-1998	1038293	19-Dec-2001
GB		ORD	Granted	9896509732218	02-Dec-1998	1038293	19-Dec-2001
IT		ORD	Granted	9896509732218	02-Dec-1998	1038293	19-Dec-2001
JP		ORD	Published	2000-524788	02-Dec-1998		
US		ORD	Granted	09/581,408	02-Dec-1998	7,020,606	28-Mar-2006

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0184

Invention Data

Friday, May 01, 2009

Page: 64

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.....
.....
.....
.....

Title: Recognition System

Priority Date: 17-Mar-1999

Country: Germany

Inventors:

Nuessle, Gerhard
Klemm, Heinz
Küstner, Michael

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0185

Invention Data

Friday, May 01, 2009

Page: 65

<u>Country</u>	Sub	Case	Status	Application	Filing	Patent	Issue Date
DE		ORD	Abandoned	19813605.6	27-Mar-1998		
AT		ORD	Granted	99105430.5	17-Mar-1999	0945705	23-Nov-2005
CH		ORD	Granted	99105430.5	17-Mar-1999	0945705	23-Nov-2005
DE	2	ORD	Granted	99105430.5	17-Mar-1999	0945705	23-Nov-2005
EP		ORD	Converted	99105430.5	17-Mar-1999	0945705	23-Nov-2005
ES		ORD	Abandoned	99105430.5	17-Mar-1999	0945705	23-Nov-2005
FR		ORD	Granted	99105430.5	17-Mar-1999	0945705	23-Nov-2005
GB		ORD	Granted	99105430.5	17-Mar-1999	0945705	23-Nov-2005
IT		ORD	Granted	99105430.5	17-Mar-1999	0945705	23-Nov-2005
NL		ORD	Abandoned	99105430.5	17-Mar-1999	0945705	23-Nov-2005
SE		ORD	Granted	99105430.5	17-Mar-1999	0945705	23-Nov-2005
US		ORD	Granted	09/277,954	29-Mar-1999	6,895,117	17-May-2005

CONFIDENTIAL

PATENT
REEL: 030174 FRAME: 0186

Exhibit M to Schedule 11.2 (a) (vi)

Case No.	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
P03133	EP 04012134.5	HBAS	Jeschke, Bärbel Gerl, Franz Schwarz, Markus Kosmala, Andreas Schulz, Matthias	no information available	no information available		Examination in progress.
P04014	EP 1560200 DE 1560200	HBAS HBAS	Jeschke, Bärbel Reh, Frank	no information available	no information available		granted Opposition period ends: Aug 26, 2009 (change published on Jan 21, 2009) no information available
P04045	EP 05013168.9	HBAS	Hennecke, Markus Schless, Volker	no information available	Claimed by Harman: Jan 23, 2004 Acknowledged		Request for Examination.

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Case No.	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
P06033	EP 06016867.1	HBAS	Wirsching, Günther	no information available	by Employee: Jan 28/Febr 2, 2004 Claimed by Harman: Oct 14, 2005 Acknowledged by Employee: Oct 19, 2005	Waiver of international registration, release of obligation to register and assignment of property right.	Examination in progress.
P92027	DE 4222916	HBAS	Class, Fritz Regel-Brietzmann, Peter Trottler, Karl	no information available	no information available		granted - no opposition filed during the opposition period
P93008	EP 0586996	Daimler Chrysler	Class, Fritz Kaltenmeier, Alfred Regel-Brietzmann, Peter	no information available	no information available		granted - no opposition filed during the opposition period

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Case No. Hanna	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
	DE 59309837.4	HBAS					granted
	DE 4229577.7						abandoned
P95037	EP 0760151	Daimler-Benz Aerospace AG	Stölzle, Anton	no information available	no information available		granted - no opposition filed during the opposition period
	DE 0760151						Presumably German part of EP
	DE 4417557						withdrawn

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Case No. Harman	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
P03035	EP 03022273.1	HBAS	Christoph, Markus	no information available	no information available		Request for Examination.
P03036	EP 03014846.4	HBAS	Christoph, Markus	no information available	no information available		Request for Examination.
P03079	EP 1478208 DE 1478208	HBAS	Buck, Markus Haulick, Tim	no information available	Claimed by Harman: March 31, 2003 Acknowledged by Employee: Apr 4, 2003		granted Opposition period ends: Oct 7, 2009 no information available online
P03136	EP 04732580.8 DE 10252457 EP 03775347.2	HBAS	Haulick, Tim Birk, Christian Linhard, Klaus	no information available	no information available		Examination in progress. abandoned Examination in progress.

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Case No. Harmann	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
P03137	DE 10252456	HBAS		no information available	no information available		granted - no opposition filed during the opposition period
P05008	EP 1640971 DE 1640971	HBAS	Buck, Markus Haulick, Tim Hetherington, Philipp A. Zarakauskas, Pierre	Aug 10, 2004	no information available		granted Opposition period ends: May 20, 2009 no information available
P05012	EP 1633121 DE 1633121	HBAS	Kellermann, Walter Herbordt, Wolfgang	no information available	no information available		granted Opposition period ends: Aug 5, 2009 no information available
P05048	EP 05001959.5	HBAS	Iser, Bernd Schmidt, Gerhard	Dec 7, 2004	no information available		granted (expected) grant published on Apr

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Case No.	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
			Uwe				15, 2009 [2009/16]
P05085	EP 06009692.2	HBAS	Schmidt, Uwe Haulick, Tim Buck, Martin Rössler, Martin Köpf, Hans-Jörg	Feb 23, 2005	no information available		grant intended (communication of Nov 11, 2008)
P08120	EP 08014151.8	n/a	Krini, Mohamed Haulick, Tim Schmidt, Uwe Paranjpe, Shreyas	March 18, 2008	Claimed by Hairman: June 18, 2008 Acknowledged by Employee: June 20, 2008 Acknowledgement of Paranjpe not available	Waiver of international registration, release of obligation to register and assignment of property right.	No information available under the application number.
P08126	EP 08015055.0	n/a	Wolff, Tobias	Dec 15, 2007	Claimed by		No information

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Case No.	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
			Buck, Markus Schmidt, Gerhard Uwe Wirsching, Günther Gonzales-Valbuena, Olga		Harman: June 17, 2008 Acknowledged by Employee: June 20/ July 14, 2008		available under the provided application number.
P08143	EP 08015561.7		Herbig, Tobias Brueckner, Raymond Raab, Martin Gruhn, Rainer	May 19, 2008	no information available		No information available under the provided application number.
P93009	DE 0612059		Linhard, Klaus	no information available	no information available		no information available
P94001	DE 0615226 DE 4307688	Daimler	Linhard, Klaus	March 11, 1993 to Daimler Benz	no information available		no information available

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Case No.	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
P94024	EP 0689190 B1	Chrysler	Linhard, Klaus	no information available	no information available		withdrawn
	DE 0689190	Daimler Chrysler					granted -- no opposition filed during the opposition period
	DE 4420894	HBAS					no information available
P95034	EP 0669606	Daimler Chrysler	Klemm, Heinz Linhard, Klaus	no information available	no information available		granted -- no opposition filed during the opposition period
	DE 0669606	Daimler					no information available
							withdrawn

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Case No.	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
	DE 4405723	Chrysler					
P97042	EP 0912974 DE 0912974	Daimler Chrysler Daimler Chrysler	Linhard, Klaus Haulick, Tim Schrögmeier, Peter	no information available	no information available		granted -- no opposition filed during the opposition period presumably German part of EP withdrawn
P97047	DE 19629132 DE 19747885.9	HBAS	Haulick, Tim Linhard, Klaus	Undated communication to Daimler Benz AG	Claimed by Daimler Benz AG: May 14, 1997 Acknowledged by Employee:		granted -- Opposition period ends: Januar 21, 2009

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Case No.	Patent No.	Registered Proprietor (according to publicly available databases)	Inventor(s)	Information of Employer acc. to Act on Employees' Inventions	Claim acc. to Act on Employees' Inventions	Miscellaneous	Status
P98049	EP 0948237	HBAS	Thomas, Hans-Jörg	no information available	June 12, 1997 Claimed by Daimler Benz Aerospace AG: March 7, 1997 No Acknowledgement of Employee available.		granted Opposition period ends: March 11, 2009 presumably German part of EP Request for Examination.
	DE 0948237						
	DE 19814971.9	HBAS					