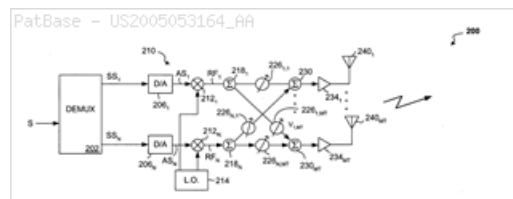


Title: SYSTEM AND METHOD FOR RF SIGNAL COMBINING AND ADAPTIVE BIT LOADING FOR DATA RATE MAXIMIZATION IN MULTI-ANTENNA COMMUNICATION SYSTEMS

Abstract: Source: US2005053164A [EN] A system and method for generating weight values based on maximum data rate for weighting elements included within signal weighting and combining arrangements used in various multi-antenna transmitter and receiver structures is disclosed herein. Weighting values for a given signal combining arrangement are set so as to maximize an output data rate of the applicable multi-antenna system in the presence of adaptive bit loading of the subcarriers of a transmitted signal. The disclosed techniques may be employed to maximize a data rate of a multi-antenna communication system by using adaptive bit loading and RF and baseband weighting schemes. In this case a search is conducted over various combinations of RF and baseband weights in order to find the weight combination which, when adaptive bit loading is also employed, maximizes the data rate.

Classifications:

International (IPC 8-9): H01Q3/00 H03C1/52 H03C3/00 H03K7/06
H04B1/00 H04B1/02 H04B1/04 H04B1/06 H04B1/10 H04B1/38
H04B1/69 H04B1/707 H04B1/713 H04B17/00 H04B7/00 H04B7/02
H04B7/04 H04B7/06 H04B7/08 H04B7/10 H04J11/00 H04K1/10
H04L1/00 H04L1/02 H04L1/06 H04L23/02 H04L25/03 H04L27/00
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H04L5/00 H04L5/12 H04M1/00 H04Q3/02 H04Q7/00 H04R17/00
H04W4/00 (Advanced/Invention);
H04B1/707 H04B7/005 H04L1/00 H04L27/26



H04W52/42 (Advanced/Non-invention);
H03C1/00 H03C3/00 H03K7/00 H04B1/10 H04B1/69 H04B1/707 H04B17/00 H04B7/02 H04B7/04 H04B7/08 H04K1/10
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H04Q7/00 (Core/Invention);
H04B1/707 H04L1/00 H04L27/26 (Core/Non-invention);
H01Q H04L (Subclass/Invention)

International (IPC 1-7): H04B1/44 H04B7/00 H04B7/02 H04B7/06 H04B7/08 H04K1/10 H04L1/00 H04L1/02 H04L1/06 H04L27/12 H04L27/28 H04M1/00 H04Q3/02 H04Q7/00

CPIC: H04B1/7115 H04B7/0613 H04L1/0003 H04L1/0009 H04L5/0046 H04L5/006 H04B7/0626 H04B7/063 H04L5/0023 H04L5/0044 H04L25/03178 H04L27/2626 H04L2025/03426 H04B7/0854 H04L1/0054 H04L1/0026 H04L1/1671 H04B7/084 H04B7/0857 H04W52/42 H04B1/02 H04B1/06 H04B7/061 H04B7/0691 H04B7/0808 H04B7/0814 H04B7/082 H04B7/0874 H04L1/0618 H04L1/0631 H04B7/0634 H04B7/0697 H04B7/0848 H04B7/08 H04L1/0002 H04B7/0615 H04B7/0842 H04L27/2608

European: H04B7/06B2F H04B7/06C H04B7/06C1 H04B7/06C1F1C H04B7/06C1F1P H04B7/06H H04B7/06H2 H04B7/06M H04B7/08 H04B7/08B2C H04B7/08B2R H04B7/08B4B H04B7/08C2 H04B7/08C4 H04B7/08C4J H04B7/08C4J2 H04B7/08C4J3 H04B7/08H H04B7/08H2 H04L1/00A1 H04L1/00B5L H04L1/06T H04L1/06T5 H04L27/26M1P H04L27/26M3 H04L5/00A3C H04L5/00C4 H04L5/00C4A H04L5/00C7A T04B1/707F3 T04B1/7115 T04B7/06H2 H04B7/06M T04L1/00A1M T04L1/00A5 T04L1/00A9B T04L1/16F15 T04L25/03B11M T04L25/03B7 T04L27/26M1P T04L5/00A3C T04W52/42

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Priority:

DE200420021918U 20040729

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Probable Assignee: AVAGO TECHNOLOGIES LTD

Assignee(s): (std): CATREUX ERCEG SEVERINE ; ZYRAY WIRELESS INC ; CATREUX SEVERINE ; ROUX PIETER W ; ERCEG VINKO ; ROUX PIETER ; WINTERS JACK ; VAN ROOYEN PIETER ; ROOYEN PIETER V ; KENT MARK ; LANDAU URI M ; ROOYEN PIETER VAN ; AVAGO TECH GENERAL IP SINGAPORE PTE LTD ; BROADCOM CORP

Assignee(s): BROADCOM CORP IRVINE ; AVAGO TECHNOLOGIES GENERAL IP SINGAPORE PTE LTD ; AVAGO TECHNOLOGIES LTD ; BANK OF AMERICA NA COLLATERAL AGENT AS ; CATREUX ERCES SEVERINE

Inventor(s): (std): CATREUX SEVERINE ; CATREUX ERCEG SEVERINE ; JACK CATREUX ERCEG SEVERINE ER ; JACK CATREUX SEVERINE ERCEG VI ; JACK WINTERS ; KENT MARK ; LANDAU URI M ; PIETER ROOYEN VAN ; PIETER ROUX ; ERCEG VINKO ; ROOYEN PIETER VAN ; ROUX PIETER ; SEVERINE CATREUX ; SEVERINE CATREUX ERCEG ; VAN ROOYEN PIETER ; VINKO ERCEG ; WINTERS JACK ; ROUX PIETER WILLEM ; ROOYEN PIETER V ; CATREUX ERCES SEVERINE ; ROUX PIETER W

Inventor(s): ROUX PIETER W IRVINE ; CATREUX ERCEG SEVERINE ERCEG VINKO ROUX PIETER VAN ; WINTERS JACK MIDDLETOWN ; VAN ROOYEN PIETER C O BROADCOM IRVINE CORP ; ROUX PIETER W SAN DIEGO ; VAN ROOYEN PIETER C O BROADCOM CORPORATION ; VAN ROOYEN PIETER C O BROADCOM IRVINE CORP ; VAN ROOYEN PIETER IRVINE ; VAN ROOYEN PIETER SAN DIEGO ; VAN ROOYEN PIETER C O BROADCOM CORP ; ROUX PIETER SAN DIEGO ; ERCEG VINKO CARDIFF ; ERCEG VINKO CARDIFF BY SEA ; ROOYEN PIETER ; LANDAU URI ; CATREUX ERCEG SEVERINE CARDIFF ; CATREUX ERCEG SEVERINE ERCEG VINKO ROUX PIETER ; CATREUX ERCEG SEVERINE ERCEG VINKO ROUX PIETER ROO ; CATREUX SEVERINE CARDIFF BY SEA ; CATREUX SEVERINE ERCEG VINKO ROUX PIETER ; CATREUX SEVERINE ERCEG VINKO ROUX PIETER ROOYEN PI ; CATREUX SEVERINE ERCEG VINKO ROUX PIETER ROOYEN PIETER VAN WINTERS JACK ; CATREUX SEVERINE ERCEG VINKO ROUX PIETER W ; CATREUX SEVERINE ERCEG VINKO ROUX PIETER W VAN ROO

Agent(s): BOSCH JEHL PATENTANWALTSGESELLSCHAFT MBH ; JEHL VOLKER ARMIN ; CHRISTOPHER C WINSLADE MCANDREWS HELD AND MALLOY ; MCANDREWS HELD AND MALLOY LTD ; STERNE KESSLER GOLDSTEIN AND FOX PLLC ; STERNE KESSLER GOLDSTEIN AND FOX P L L C

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

2) Family number: 61542064 (US2016029232A)

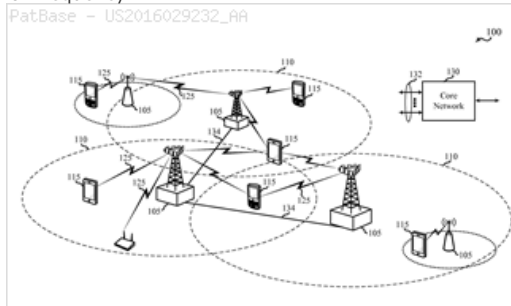
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Title: ULTRA RELIABLE LINK DESIGN

Abstract: Source: US2016029232A [EN] Techniques are described for wireless communication. A first method includes measuring, by a first device, a condition of a wireless channel; and generating at least one channel side information feedback message based on the measured condition of the wireless channel. The at least one channel side information feedback message provides information on a relationship of a set of parameters, including a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter. A second method includes measuring, by a first device, interference on a wireless channel; identifying an interfering device for the wireless channel based on the measurement; and generating a channel side information feedback message based on the measured interference on the wireless channel. The channel side information feedback message indicates the interfering device for the wireless channel and a correlation of interference from the interfering device with time or frequency.

Classifications:

International (IPC 8-9): H04B17/24 H04B17/309 H04B7/005 H04L1/00 H04L1/12 H04L5/00 H04W H04W24/00 H04W24/02 H04W24/04 H04W24/08 H04W24/10 H04W28/18 H04W28/22 H04W40/12 H04W72/08 (Advanced/Invention); H04W24/10 (Core/Invention)
CPC: H04W72/08 H04L5/0058 H04W24/02 H04B17/24 H04W72/082 H04W24/08 H04W24/10
US: 370/252



Family:

Publication number	Publication date	Application number	Application date
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Priority:

US20140027623P 20140722 US20140567887 20141211 US20140567989 20141211
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Probable Assignee: QUALCOMM INC

Assignee(s): (std): QUALCOMM INC

Assignee(s): SORIAGA JOSEPH ; SMEE JOHN EDWARD ; AZARIAN YAZDI KAMBIZ ; BHUSHAN NAGA ; GOROKHOV ALEXEI YURIEVITCH ; JI TINGFANG ; GAAL PETER ; MUKKAVILLI KRISHNA KIRAN

Inventor(s): (std): ALEXEI YURIEVITCH GOROKHOV ; AZARIAN YAZDI KAMBIZ ; BHUSHAN NAGA ; GAAL PETER ; GOROKHOV ALEXEI YURIEVITCH ; JI TINGFANG ; JOHN EDWARD SMEE ; JOSEPH SORIAGA ; KAMBIZ AZARIAN YAZDI ; KRISHNA KIRAN MUKKAVILLI ; MUKKAVILLI KRISHNA KIRAN ; NAGA BHUSHAN ; PETER GAAL ; SMEE JOHN EDWARD ; SORIAGA JOSEPH ; TINGFANG JI

Agent(s): MADDERNS PATENT AND TRADE MARK ATTORNEYS; SMART AND BIGGAR; ESTUDIO CLARKE MODET AND CO CHILE LIMITADA; JOSE ANDRES RINCON USCATEGUI; WEGNER HANS; HOLLAND AND HART LLP; SCHRAMM PAUL M

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 30222191 (US2004059212A)

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Title: APPARATUS AND METHOD FOR MEASURING BIOLOGIC PARAMETERS

Abstract: Source: US2004059212A [EN] Support structures for positioning sensors on a physiologic tunnel for measuring physical, chemical and biological parameters of the body and to produce an action according to the measured value of the parameters. The support structure includes a sensor fitted on the support structures using a special geometry for acquiring continuous and undisturbed data on the physiology of the body. Signals are transmitted to a remote station by wireless transmission such as by electromagnetic waves, radio waves, infrared, sound and the like or by being reported locally by audio or visual transmission. The physical and chemical parameters include brain function, metabolic function, hydrodynamic function, hydration status, levels of chemical compounds in the blood, and the like. The support structure includes patches, clips, eyeglasses, head mounted gear and the like, containing passive or active sensors positioned at the end of the tunnel with sensing systems positioned on and accessing a physiologic tunnel.

Classifications:

International (IPC 8-9): A41D20/00 A42B3/04 A42C5/02 A61B

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A61B6/00 A61B8/08 A61F7/00 A61F7/12 A61K31/01 A61K31/785
A61K33/44 A61L27/54 A61L29/10 A61L31/08 A61L33/02 A61M21/02
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B60W40/08 B60W50/00 B62D6/00 F24F11/02 G01B11/24 G01J1/02
G01J5/00 G01J5/10 G01K G01K1/00 G01K1/02 G01K1/16
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G02C11/00 G08B5/36 H04N5/225 H04N5/33
H04N7/18 (Advanced/Invention);
A61B5/00 A61B5/01 A61B5/02 A61B5/0205 A61B5/04 A61B5/145
A61B5/1491 A61B8/08 G01K7/22 (Advanced/Non-invention);
A61B10/00 A61B5/00 A61B5/01 A61K31/01 A61K31/74 A61K33/44
A61L27/00 A61L29/00 A61L31/08 A61L33/00 A61P7/00 A61P9/00
F24F11/02 (Core/Invention);
A61B G01K G01N (Subclass/Invention)

International (IPC 1-7): A61B5/00 A61B5/01 A61B5/04 G01B11/24
G01K1/02 G01N0/00 G02B27/00 G02C11/00

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European: A61B5/00B A61B5/00B3D A61B5/00B4 A61B5/00P
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A61B5/68B2B A61B5/68B3D1 A61B5/68F G01K13/00B G02C11/10 K61B560/04B2 K61B560/04B4 K61B562/02

US: 1/1 250/338.1 250/339.11 250/339.15 250/341.1 250/341.8 340/539.12 348/77 351/158 374/121 374/141 374/163
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Patent Application Publication Mar. 25, 2004 Sheet 1 of 65 US 2004/0059212 A1

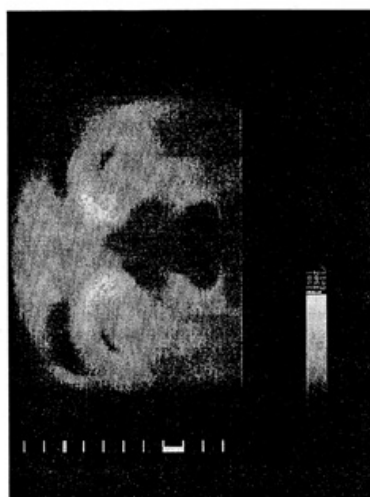


FIG. 1A

Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: GEELUX HOLDINGS LTD

Assignee(s): (std): AB MARCIO MARC AURELIO MARTINS ; ABREU MARCIO ; ABREU MARCIO M ; ABREU MARCIO MARC ; ABREU MARCIO MARC AURELIO MART ; ABREU MARCIO MARC AURELIO MARTINS ; MARCIO ABREU ; ABREU MARCIO MARC AURELIO MARTINUS ; MARCIO MARC ABREU ; GEELUX HOLDINGS LTD ; GEELUX HOLDING LTD ; MARCIO MARC AURELIO MARTINS AB ; MARCIO ABREU ; MARCIO MARC AURIELO MARTINS AB ; MARCIO MARC AURELIO MARTINS ABREU

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Inventor(s): MARC AURELIO MARTINS ; ABREU MARCIO ; ABREU MARCIO MARC AURELIO MARTINS ; MARCIO MARC AURIELO MARTINS ABREU ; ABREU MARCIO MARC AURELIO MARTINS NORTH HAVEN ; ABREU MARCIO MARC AURELIO ; ABREU MARCIO

Agent(s): FB RICE; FB RICE PTY LTD; MOFFAT AND CO; PFENNING MEINIG AND PARTNER MBB
PATENTANWALTE; WILLIAMS MICHAEL DAVID; PFENNING MEINIG AND PARTNER GBR; PFENNING MEINIG AND PARTNER MBB; TRIGO JOSE RAMON; WOLFF BREGMAN AND GOLLER; NISHIJIMA TAKAKI; OHTSUKA FUMIAKI; SUDA HIROYUKI; KONDO NAOKI; UESUGI HIROSHI; DESHIMARU TAKESHI; ATMD BIRD AND BIRD LLP; JACOBSON HOLMAN PLLC; STUDEBAKER AND BRACKETT PC; SCHERER JONATHAN L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Abstract: Source: US2004015075A [EN] A system for calculating a position of a radioactivity emitting source in a system-of-coordinates, the system comprising (a) a radioactive emission detector; (b) a position tracking system being connected to and/or communicating with the radioactive emission detector; and (c) a data processor being designed and configured for receiving data inputs from the position tracking system and from the radioactive emission detector and for calculating the position of the radioactivity emitting source in the system-of-coordinates.

Classifications:

International (IPC 8-9): A61B1/05 A61B19/00 A61B5/00 A61B5/05 A61B5/055 A61B5/06 A61B5/07 A61B5/11 A61B6/00 A61B6/02 A61B6/03 A61B6/06 A61B6/12 A61F2/04 A61K101/00 A61K103/00 A61K103/10 A61K103/20 A61K103/30 A61K103/32 A61K31/66 A61K49/00 A61K51/00 A61K51/02 A61K51/04 A61K51/08 A61M36/00 A61M36/14 A61M5/00 A61M5/31 A61N5/00 A61P35/00 A61P9/10 C08F210/00 C12Q1/04 C12Q1/16 C12Q1/68 F02B1/00 F16J15/02 F16J15/50 G01B11/28 G01B5/26 G01C19/00 G01C3/14 G01D18/00 G01J1/42 G01N33/574 G01N33/60 G01T1/00 G01T1/16 G01T1/161 G01T1/164 G01T1/166 G01T1/20 G01T1/24 G01T1/29 G06F15/00 G06F17/00 G06F17/30 G06F19/00 G06F3/00 G06K9/00 G06K9/36 G06K9/68 G06Q10/00 G06Q50/00 G06Q50/22 G06T1/00 G06T11/00 G06T15/00 G06T17/00 G06T5/10 G06T5/50 G06T7/00 G21F5/00 G21F5/015 G21F5/06 H01L27/146 H04N13/00 H04N15/00 (Advanced/Invention); A61B1/31 A61B19/00 A61B5/055 A61B6/00 A61B6/03 A61B6/12 A61B8/00 A61B8/08 A61K101/00 A61K103/00 A61K103/10 A61K103/20 A61K103/30 A61K103/32 A61N7/02 G01B11/28 G06K9/36 (Advanced/Non-invention); A61B1/05 A61B19/00 A61B5/00 A61B5/05 A61B5/06 A61B5/07 A61B5/11 A61B6/00 A61B6/03 A61B6/12 A61K49/00 A61K51/00 A61K51/02 A61M36/00 A61N5/00 A61P35/00 A61P9/00 C08F210/00 C12Q1/04 C12Q1/16 C12Q1/68 F02B1/00 F16J15/02 F16J15/50 G01B11/28 G01B5/26 G01C19/00 G01C3/00 G01D18/00 G01J1/42 G01T1/00 G06F15/00 G06F17/00 G06F17/30 G06F19/00 G06F3/00 G06K9/00 G06K9/36 G06K9/68 G06Q50/00 G06T1/00 G06T15/00 G06T17/00 G06T5/10 G06T5/50 G06T7/00 G21F5/00 H04N13/00 H04N15/00 (Core/Invention); A61B1/31 A61B19/00 A61B5/055 A61B6/03 A61B8/00 A61B8/08 A61N7/00 G01B11/28 G06K9/36 (Core/Non-invention); G01T (Subclass/Invention)

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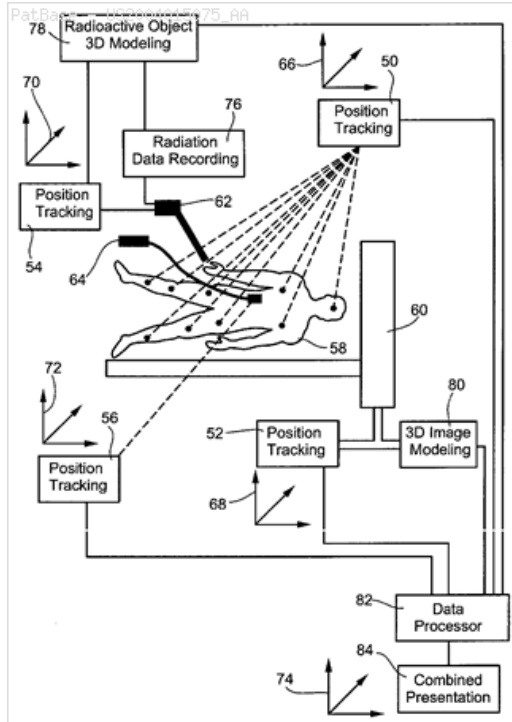
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Probable Assignee: BIOSENSORS INT GROUP LTD

Assignee(s): (std): BIOSENSORS INT GROUP LTD ; BRONSHTINE ZOHR ; BLOSENSOR INT GROUP LTD ; BEN HAIM SHIOMO ; ROUSSO BENNY ; MOADDEB SHAHRAM ; RAVHON RAN ; DICHTERMAN ELI ; DICKMAN DALIA ; KIMCHY YOAV ; NAGLER MICHAEL ; POPPER ZIV ; MELMAN HAIM ; ROTH NATHANIEL ; EINAV OMER ; NIR Yael ; GLUHOVSKY LEONID ; AMRAMI RONI ; ANTEBI UDI ; BEN DAVID GAL ; BEN HAIM SHLOMO ; BOUSKILA YONA ; BRONSHTINE ZOHAR ; BERMAN DANIEL ; BEN HAIM SIMONA ; BENNY ROUSSO ; OMER EINAV ; HAGLER MICHAEL ; DALIA DICKMAN ; MICHAEL NAGLER ; DAVID GAL BEN ; VTARGET LTD ; SPECTRUM DYNAMICS ; TARGET CO LTD V ; TARGET TECHNOLOGIES LTD V ; SPECTRUM DYNAMICS LLC ; ZIV OMER ; SAYADA CHALOM B ; VALLABHAJOSULA SHANKAR ; SIDORENKO NICK ; ZILBERSTEIN YOEL ; SPECTRUM DYNAMICS ISRAEL LTD ; WEISSBERG NIR ; ZILBERSTIEN YOEL ; ZIV POPPER ; SHLOMO BEN HAIM ; ZOHAR BRONSHTINE ; YOEL ZILBERSTEIN ; TARGET LTD V ; SAYADA CHALOM BRUNO

Assignee(s): SPECTRUM DYNAMICS MEDICAL LTD ; V TARGET TECHNOLOGIES LTD ; V TARGET CO LTD ; YOAV KIMCHY ; UDI ANTEBI ; YONA BOUSKILA ; TYLERTON INT INC ; SPECTRUM DYNAMICS P.O. BOX 202639120TIRAT HACARMELIL ; SPECTRUM DYNAMICS LLC30 RAMLAND ROAD SOUTHORANGEBURGNY10962US ; SPECTRUM DYNAMICS (ISRAEL) LTD ; TYLERTON INT ; SPECTRUM DYNAMICS LTD ; V TARGET LTD ; V TARGET CO ; RONI AMRAMI ; GAL BEN DAVID ; NICK SIDORENKO ; MEDINVEST CAPITAL RL SA ; BIOSENSORS GROUP INT LTD ; MEDINVEST CAPITAL SA RL

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Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; BULL HOUSSEY AND TUPPER LLP; MACHTALERE GEORGES; DENNEMEYER AND ASSOCIATES SA; FREEMAN AVI ET AL; BECK GREENER; SCHMITZ JEAN MARIE ET AL; FICHTER ROBERT ARNO ET AL; GE EHRlich 1995 LTD; G E EHRlich 1995 LTD C O ANTHONY CASTORINA; MARTIN MOYNIHAN, C/O ANTHONY CASTORINA; MARTIN MOYNIHAN C O ANTHONY CASTORINA; MARTIN MOYNIHAN, ANTHONY CASTORINA; MARTIN MOYNIHAN ANTHONY CASTORINA; WOLF BLOCK SHORR AND SOLIS-COHN LLP; WOLF BLOCK SHORR AND SOLIS COHN LLP; MARTIN D MOYNIHAN PRISI INC; MARTIN D MOYNIHAN PRISI; MARTIN D MOYNIHAN D B A PRISI INC; WILLIAM H DIPPET ECKERT SEAMANS CHERIN AND MELLOTT LLC; WOLF BLOCK SCHORR AND SOLIS COHN LLP; DIPPET WILLIAM H; WILLIAM H; ECKERT SEAMANS CHERIN AND MELLOTT LLC; ECKERT SEAMANS CHERIN AND MELLOTT LLC; GE EHRlich 1995 LTD ET AL; G E EHRlich 1995 LTD

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

5) Family number: 24677114 (US2003035491A)

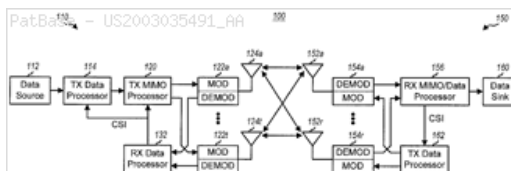
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Title: METHOD AND APPARATUS FOR PROCESSING DATA IN A MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) COMMUNICATION SYSTEM UTILIZING CHANNEL STATE INFORMATION

Abstract: Source: US2003035491A [EN] Techniques to "successively" process received signals at a receiver unit in a MIMO system to recover transmitted data, and to "adaptively" process data at a transmitter unit based on channel state information available for the MIMO channel. A successive cancellation receiver processing technique is used to process the received signals and performs a number of iterations to provide decoded data streams. For each iteration, input (e.g., received) signals for the iteration are processed to provide one or more symbol streams. One of the symbol streams is selected and processed to provide a decoded data stream. The interference due to the decoded data stream is approximately removed (i.e., canceled) from the input signals provided to the next iteration. The channel characteristics are estimated and reported back to the transmitter system and used to adjust (i.e., adapt) the processing (e.g., coding, modulation, and so on) of data prior to transmission.

Classifications:

International (IPC 8-9): H04B7/005 H04B7/02 H04B7/04 H04B7/06 H04B7/08 H04B7/10 H04J11/00 H04J99/00 H04L1/00 H04L1/02 H04L1/06 H04L1/08 H04L27/06 (Advanced/Invention); H04B7/12 (Advanced/Non-invention); H04B7/005 H04B7/02 H04B7/04 H04B7/08 H04J11/00 H04J99/00 H04L1/00 H04L1/02 H04L1/08 (Core/Invention); H04B7/02 (Core/Non-invention); H04B (Subclass/Invention); H04L (Subclass/Non-invention)



International (IPC 1-7): H04B1/00 H04B7/02 H04B7/04 H04B7/06 H04B7/08 H04J15/00 H04K1/10 H04L1/02 H04L1/06 H04L27/28

CPC: H04B7/10 H04B7/0417 H04B7/0626 H04B7/0689 H04B7/0697 H04B7/0854 H04B7/12 H04L1/0009 H04L1/0026 H04L1/0048 H04L1/005 H04L1/0071

European: H04B7/04M1 H04B7/06C1F1C H04B7/06M H04B7/08C4J2 H04L1/00A1M H04L1/00A5 H04L1/00B5E3

H04L1/00B5E5 H04L1/00B7V T04B7/06H T04B7/06H1 T04B7/12 T04L1/00A9B

US: 375/26 375/260 375/260S 375/267 375/267P 375/346 455/132 455/132S

Family:

Publication number	Publication date	Application number	Application date
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Priority:

EP20020736690 20020507 JP20020590539 20020507 US20010854235 20010511
WO2002US14526 20020507 US20040903813 20040729 JP20020590539T 20020507

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK

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Priority:

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Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA GB GE GN GR HU IE IT JP KE KG KP KR KZ LI LK LT LU LV MC MD MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SI SK SN SZ TD TG TJ TT UA UG UZ VN

7) Family number: 31969343 (US2005240253A)

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Title: SYSTEMS AND METHODS FOR ALTERING VESTIBULAR BIOLOGY

Abstract: Source: US2005240253A [EN] The present invention relates to systems and methods for management of brain and body functions and sensory perception. For example, the present invention provides systems and methods of sensory substitution and sensory enhancement (augmentation) as well as motor control enhancement. The present invention also provides systems and methods of treating diseases and conditions, as well as providing enhanced physical and mental health and performance through sensory substitution, sensory enhancement, and related effects. In particular, the present invention provides systems and methods for altering vestibular biology to, among other things, treat diseases and conditions or enhance performance related to vestibular functions.

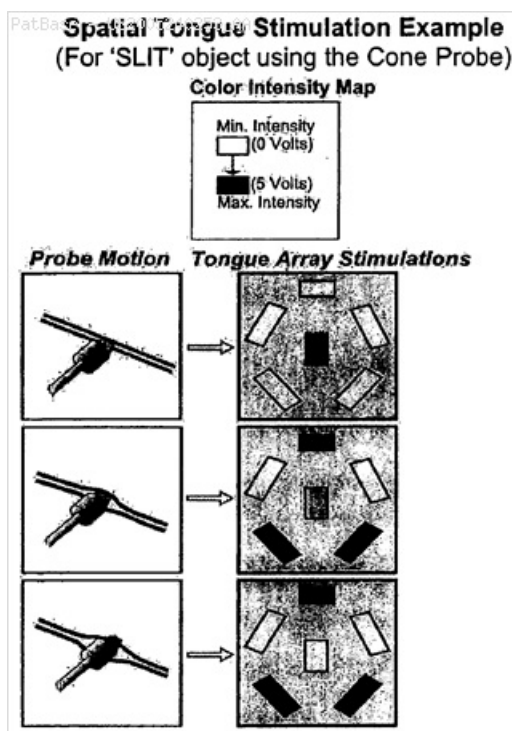
Classifications:

International (IPC 8-9): A61B19/00 A61B5/00 A61B5/05 A61B5/055 A61B5/103 A61B5/11 A61B5/117 A61B5/16 A61B9/00 A61F11/00 A61F4/00 A61F5/00 A61F5/58 A61F9/00 A61F9/08 A61H39/04 A61H99/00 A61M21/00 A61M21/02 A61M25/00 A61N1/00 A61N1/04 A61N1/05 A61N1/06 A61N1/08 A61N1/18 A61N1/20 A61N1/32 A61N1/36 B63C11/02 G08B6/00 (Advanced/Invention); A61B5/05 A61B5/055 A61M21/00 A61M21/02 G09B21/06 (Advanced/Non-invention); A61B5/05 A61B5/103 A61N1/00 A61N1/04 A61N1/08 A61N1/18 (Core/Invention); A61B5/055 (Core/Non-invention); A61K (Subclass/Invention)

International (IPC 1-7): A61B5/103 A61B5/117 A61K A61N1/04 A61N1/06 A61N1/08 A61N1/20 A61N1/32
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European: A61B5/0492 A61B5/11 A61B5/11U A61B5/48S A61B5/68B2B5 A61M21/00 A61N1/36 A61N1/36E A61N1/36Z A61N1/36Z3G G06F3/01B G06F3/01B2 G06F3/01B8 G06F3/01F K61B5/11P K61B5/11R K61B5/11T K61B5/1455N4 K61B5/45F K61B5/45K K61B5/72F K61B5/72K10D K61B562/02B K61B562/04D K61F11/00 K61F9/08 K61M21/00A4 K61M21/00A5 K61M21/00A6 K61M210/06D6 K61N1/05 K61N1/36E K61N1/36E6 K61N1/36V K61N1/36Z K61N1/36Z3E

US: 600/554 600/554S 600/595 600/595P 600/595S 607/134 607/134P 607/2 607/2P 607/45 607/45P 607/54 607/54P 607/62



Family:

Publication number	Publication date	Application number	Application date
CA2547445 AA	20060526	CA20042547445	20041126
CA2547445 C	20090310	CA20042547445	20041126
CA2648286 AA	20050609	CA20042648286	20041126
EP1691766 A2	20060823	EP20040817912	20041126
EP1691766 A4	20110323	EP20040817912	20041126
JP2007518469 T2	20070712	JP20060541468T	20041126
US2005240253 AA	20051027	US20050033246	20050111
US2006161218 AA	20060720	US20050234453	20050923
US2006241718 AA	20061026	US20050234457	20050923
US2007250119 AA	20071025	US20070657376	20070124
US2008009772 AA	20080110	US20050234635	20050923
US2008228239 AA	20080918	US20070926135	20071029
US2009312808 AA	20091217	US20070926124	20071029
US2009312817 AA	20091217	US20070925393	20071026
US2009326604 AA	20091231	US20040998222	20041126
US2015290453 AA	20151015	US20150692412	20150421
US2015290454 AA	20151015	US20150692419	20150421
WO05051329 A2	20050609	WO2004US39754	20041126
WO05051329 A3	20070419	WO2004US39754	20041126

Priority:

CA20042547445	20041126	CA20042648286	20041126	US20030525359P	20031126
US20050234457	20050923	US20050234453	20050923	US20040998222	20041126
US20040605988P	20040831	US20040615305P	20041001	US20050033246	20050111
US20070926135	20071029	US20070926124	20071029	US20060854676P	20061026
US20070925393	20071026	WO2004US39754	20041126	US20050234635	20050923
US20070657376	20070124	US20060761709P	20060124	US20150692419	20150421

Probable Assignee: WICAB INC

Assignee(s): (std): BACH Y RITA PAUL ; DANILOV YURI PETROVICH ; TYLER MITCHELL EUGENE ; WICAB INC

Inventor(s): (std): BACH Y RITA PAUL ; DANILOV YURI P ; DANILOV YURI PETROVICH ; HOGLE RICHARD ; LEDERER SCOTT ; TYLER MITCHELL E ; TYLER MITCHELL EUGENE ; BACH Y RITA JUANA E

Inventor(s): BACH Y RITA JUANA ; TYLER MITCHELL ; DANILOV YURI ; BACH Y RITA JUANA ESTHER

Agent(s): SMART AND BIGGAR; OSAKABE SUGURU; SHIMIZU HATSUSHI; MARY ANN BROWN, MEDLEN AND CARROLL LLP; MARY ANN BROWN MEDLEN AND CARROLL LLP; MEDLEN AND CARROLL LLP, SUITE 350; MEDLEN AND CARROLL LLP SUITE 350; MEDLEN AND CARROLL LLP; CASIMIR JONES SC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

8) Family number: 47450583 (US2010271931A)

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Title: CHANNEL STATE INFORMATION RECONSTRUCTION FROM SPARSE DATA

Abstract: Source: US2010271931A [EN] Accurate downlink channel estimates are calculated based on infrequently transmitted Channel State Information (CSI) feedback data from a UE 20. A plurality of non-uniformly spaced digital CSI feedback samples, representing the frequency response of a downlink communication channel, is received from the UE. The received CSI feedback samples are demodulated and inverse quantized. A time domain tap delay channel model is generated from the inverse quantized CSI feedback samples. The time domain tap delay channel model may be frequency-transformed to obtain a reconstructed frequency response of the downlink communication channel in the frequency domain. Alternatively, channel delays may be estimated based on prior delays and/or known references signals transmitted on the uplink. Channel estimates between CSI reporting instances may be predicted, such as by a sample and hold or a linear predictor. The delays may be presumed fixed, and Kalman filter coefficients evolved over time.

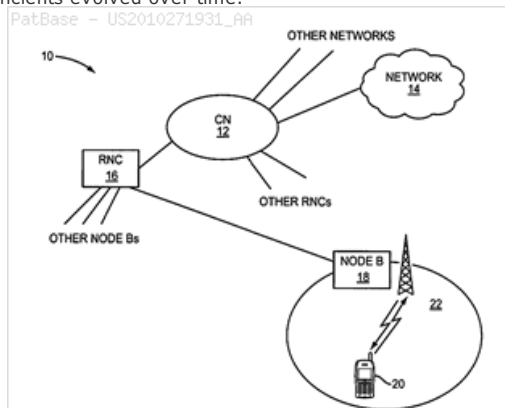
Classifications:

International (IPC 8-9): G06F11/10 H03M13/05 H04B15/00 H04B17/00 H04B17/336 H04B17/364 H04B7/02 H04B7/024 H04B7/04 H04B7/06 H04B7/08 H04B7/26 H04J1/00 H04J11/00 H04J3/00 H04J99/00 H04L1/00 H04L1/06 H04L1/20 H04L12/26 H04L25/02 H04L27/26 H04W24/00 H04W72/04 (Advanced/Invention); H04B7/06 H04L1/00 H04L25/02 (Advanced/Non-invention); H04B H04L (Subclass/Invention)

CPC: H04B15/00 H04B17/0047 H04B7/0822 H04L5/0023 H04L5/0048 H04L1/0029 H04B7/024 H04B7/0626 H04B7/0632 H04B7/0689 H04B7/0606 H04B7/0639 H04B7/0691 H04B7/0874 H04B17/336 H04B17/364 H04L1/0003 H04L1/0009 H04L1/0019 H04L1/0026 H04L1/20 H04L25/0212 H04L25/022 H04L25/0224

European: H04B17/00B1D H04B17/00B1S H04B7/02M1 H04L1/00A8S H04L1/00A9B H04L1/20 T04B7/06C1F1C T04B7/06C1F3C T04L1/00A1M T04L1/00A5 T04L25/02C3 T04L25/02C5 T04L25/02C7

US: 370/210 370/210P 370/252 370/329 370/329P 370/336 370/336P 370/482 370/491 455/67.11 455/67.110S 714/752 714/752S 714/E11.032 714/E11.032S

**Family:**

Publication number	Publication date	Application number	Application date
CA2759845 AA	20111024	CA20102759845	20100423
CA2759845 C	20170905	CA20102759845	20100423
CN102415002 A	20120411	CN201080019009	20100423
CN102415002 B	20150603	CN201080019009	20100423

CN102415003 A	20120411	CN201080019010	20100423
CN102415003 B	20141210	CN201080019010	20100423
CN106664128 A	20170510	CN201580042172	20150528
DE602010013516 D1	20140327	DE201060013516T	20100423
DK2422455 T3	20140519	DK20100720463T	20100423
EP2422455 A2	20120229	EP20100720463	20100423
EP2422455 B1	20140212	EP20100720463	20100423
EP2422456 A2	20120229	EP20100720464	20100423
EP2422456 B1	20170927	EP20100720464	20100423
EP3152844 A1	20170412	EP20150733534	20150528
HK1165121 A1	20151023	HK20120105769	20120613
IN09137DN2011 A	20130927	IN2011DN09137	20111122
IN201617039439 A	20170303	IN201617039439	20161118
JP2012525053 T2	20121018	JP20120506631T	20100423
JP5514300 B2	20140604	JP20120506631T	20100423
KR101647171 B1	20160823	KR201117027913	20100423
KR20120007539 A	20120120	KR201117027913	20100423
MX2011010720 A1	20111021	MX20110010720	20100423
US2010271931 AA	20101028	US20090555973	20090909
US2010272074 AA	20101028	US20090555966	20090909
US2012188972 AA	20120726	US20120439759	20120404
US2014286267 AA	20140925	US20140296273	20140604
US8208397 BB	20120626	US20090555966	20090909
US8923110 BB	20141230	US20090555973	20090909
US8923148 BB	20141230	US20120439759	20120404
US9654187 BB	20170516	US20140296273	20140604
WO10122535 A2	20101028	WO20101B51807	20100423
WO10122535 A3	20110331	WO20101B51807	20100423
WO10122536 A2	20101028	WO20101B51808	20100423
WO10122536 A3	20110317	WO20101B51808	20100423
WO15186026 A1	20151210	WO20151B53990	20150528

Priority:

EP20100720463	20100423	US20090172484P	20090424	US20090555973	20090909
US20090555966	20090909	US20120439759	20120404	US20140296273	20140604
WO20101B51808	20100423	WO20101B51807	20100423	WO20151B53990	20150528

Probable Assignee: TELEFONAKTIEBOLAGET LM ERICSSON PUBL

Assignee(s): (std): CHENG JUNG FU ; ERICSSON TELEFON AB L M ; HUI DENNIS ; KRASNY LEONID ; TELEFONAKTIEBOLAGET L M ERICSSON ; TELEFONAKTIEBOLAGET L M ERICSSON PUBL ; ZANGI KAMBIZ ; TELEFONAKTIEBOLAGET LM ERICSSON PUBL

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Inventor(s): HUI DENNIS SUNNYVALE ; FUNG FU CHENG

Agent(s): ERICSSON CANADA PATENT GROUP; HOFFMANN EITLE; ERICSSON; REES SIMON JOHN LEWIS; HAGIWARA YASUSHI; KAMEYA YOSHIKI; KANEMOTO TETSUO; ERICSSON INC; BETHEA THOMAS ET AL; HENDERSON MYMY ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 43217209 (US2009116374A)

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Title: ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING SYNCHRONIZATION

Abstract: Source: US2009116374A [EN] Embodiments are directed to first and second OFDM pilot symbols. The first and second pilot symbols may have first and second sets, respectively, of allowed, forbidden, and active carrier frequencies. The second sets of carrier frequencies may be formed by frequency shifting the respective first sets by a predetermined frequency, such as the frequency difference between adjacent carriers. An embodiment is directed to frequency translating part of a first received pilot symbol by one carrier interval in a first direction, frequency translating part of a second received pilot symbol by one carrier interval in a second direction that is opposite from the first direction, and forming a correlation by multiplying the frequency translated parts of the first and second pilot symbols by complex conjugates of parts of the pilot symbols upon which frequency translation has not been performed, and summing the multiplication results.

Classifications:

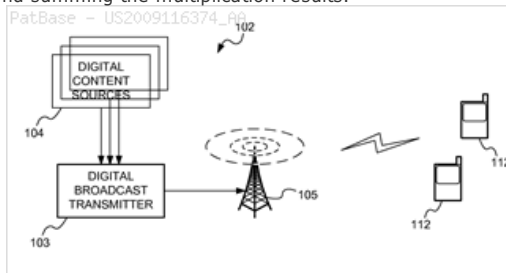
International (IPC 8-9): H04J11/00 H04J3/06 H04J9/00 H04L H04L27/06 H04L27/26 H04L5/00 H04L5/04 (Advanced/Invention); H04L5/00 (Advanced/Non-invention); H04J11/00 H04L27/06 H04L27/26 H04L5/00 (Core/Invention); H04L27/26 H04L5/00 (Core/Non-invention); H04L (Subclass/Invention)

International (IPC 1-7): H04L5/00

CPC: H04L27/2656 H04L27/2675 H04L5/0007 H04L5/005 H04L5/0053 H04L27/2613 H04L27/2657

European: H04L27/26M1R3 H04L27/26M5C1 T04L5/00A2A1 T04L5/00C5A T04L5/00C6

US: 370/203 370/203P 370/204 370/208 370/210 370/330 370/503 375/298 375/343 375/343P



Family:

Publication number	Publication date	Application number	Application date
AR069082 AA	20091230	AR2008P104704	20081028
CN101884202 A	20101110	CN200880118823	20081017

CN101884202 B	20130327	CN200880118823	20081017
DK2215794 T3	20160912	DK20080807238T	20081017
EP2215794 A2	20100811	EP20080807238	20081017
EP2215794 B1	20160629	EP20080807238	20081017
ES2589061 T3	20161108	ES20080807238T	20081017
HR20161088 T1	20161021	HR20160001088	20160825
PL2215794 T3	20161230	PL20080807238T	20081017
TW200931906 A	20090716	TW20080142386	20081103
TWI467974 B	20150101	TW20080142386	20081103
US2009116374 AA	20090507	US20070934462	20071102
US2010091916 AA	20100415	US20090637271	20091214
US7652980 BB	20100126	US20070934462	20071102
US8130631 BB	20120306	US20090637271	20091214
WO09056933 A2	20090507	WO2008IB02821	20081017
WO09056933 A3	20091119	WO2008IB02821	20081017
ZA201003654 A	20111026	ZA20100003654	20100524

Priority:

EP20080807238 20081017 US20070934462 20071102 US20090637271 20091214
WO2008IB02821 20081017

Probable Assignee: NOKIA CORP

Assignee(s): (std): HENRIKSSON JUKKA ; HENRIKSSON JUKKA ALLAN ; NOKIA CORP ; NOKIA INC ; NOKIA TECH OY ; NOKIA TECHNOLOGIES OY ; TUPALA MIIKA ; VESMA JUSSI

Inventor(s): (std): ALLAN HENRIKSSON JUKKA ; HENRIKSSON JUKKA ; HENRIKSSON JUKKA ALLAN ; JUSSI VESMA ; MIIKA TUPALA ; TUPALA MIIKA ; TUPALA MIIKA SAKARI ; VESMA JUSSI

Agent(s): DERRY PAUL STEFAN; VALLEJO JUAN PEDRO; BANNER AND WITCOFF LTD; WRIGHT BRADLEY C

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

10) Family number: 43177032 (US2009103651A)

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Title: DIGITAL VIDEO BROADCAST SERVICE DISCOVERY

Abstract: Source: US2009103651A [EN] Embodiments are directed to binary phase shift key modulating a first pilot symbol according to a reference sequence, and differentially binary phase shift key modulating a second pilot symbols. The original reference sequence and the delayed differentially modulated sequence are then combined before performing an Inverse Fast Fourier Transform and inserting a guard interval. Receiver operations are an inverse of the transmitter operations, which were just discussed. The receiver does not have to know the reference sequence. Embodiments are directed to specifying a plurality of seeds that are bit patterns each having r bits not all of which have a value of zero, extending the seeds into respective sequences by applying to each seed a recurrence formula; and using one of the sequences as a comb sequence and using the sequences other than the comb sequence as binary phase shift keying patterns.

Classifications:

International (IPC 8-9): H04J11/00 H04K1/10 H04L25/02 H04L27/20 H04L27/22 H04L27/233 H04L27/26 H04L27/28 H04L5/00 H04N7/24 (Advanced/Invention); H04L5/00 (Advanced/Non-invention); H04L27/20 H04L27/22 H04L27/233 H04L27/26 H04L5/00 (Core/Invention); H04L25/02 H04L27/26 H04L5/00 (Core/Non-invention)

International (IPC 1-7): H04L27/233 H04L27/26 H04N7/173

CPC: H04L5/005 H04L27/2659 H04L27/2675 H04L27/2685 H04L27/2613 H04L5/0007 H04L5/0053 H04L27/2331

European: H04L27/233A H04L27/26M1R3 T04L5/00A2A1 T04L5/00C6

US: 375/260 375/308 375/308P 375/330 375/330S 725/62 725/62P



Family:

Publication number	Publication date	Application number	Application date
AR068863 AA	20091209	AR2008P104474	20081014
EP2201734 A2	20100630	EP20080807212	20081002
EP2816770 A2	20141224	EP20140174094	20081002
EP2816770 A3	20150311	EP20140174094	20081002
IN02234DN2010 A	20120316	IN2010DN02234	20100330
JP2011501493 T2	20110106	JP20100528499T	20081002
JP5368458 B2	20131218	JP20100528499T	20081002
TH106630 A	20110318	TH20081005117	20081006
TW200926704 A	20090616	TW20080137897	20081002
TWI441490 B	20140611	TW20080137897	20081002
US2009103651 AA	20090423	US20070874359	20071018
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US8675752 BB	20140318	US20110239465	20110922
WO09050552 A2	20090423	WO2008IB02639	20081002
WO09050552 A3	20100128	WO2008IB02639	20081002

Priority:

EP20080807212 20081002 US20070874359 20071018 WO2008IB02639 20081002
US20110239465 20110922

Probable Assignee: NOKIA CORP

Assignee(s): (std): LAHTONEN JYRKI ; NOKIA CORP ; NOKIA INC ; TUPALA MIIKA ; VESMA JUSSI

Assignee(s): NOKIA CORPORATIONFI

Inventor(s): (std): LAHTONEN JYRKI ; TUPALA MIIKA ; VESMA JUSSI

Inventor(s): VESMA JUSTI
Agent(s): DERRY PAUL STEFAN; BANNER AND WITCOFF LTD; WRIGHT BRADLEY C
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

11) Family number: 56663486 (US2015327246A)

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Title: METHOD FOR FEEDING BACK CHANNEL STATUS INFORMATION IN WIRELESS COMMUNICATION SYSTEM SUPPORTING MULTIPLE ANTENNAS, AND APPARATUS THEREFOR

Abstract: Source: US2015327246A [EN] The present invention relates to a method for feeding back, by a terminal, channel status information (CSI) in a wireless communication system. In detail, the method includes the steps of feeding back a subband channel quality indication (CQI) and a subband precoding matrix index (PMI), wherein a first subband size for the subband CQI and a second subband size for the subband PMI are set differently.

Classifications:

International (IPC 8-9): H04B7/04 H04B7/0417 H04B7/06 H04B7/26 H04L1/00 H04L25/03 H04L5/00 H04W24/10 H04W72/04 (Advanced/Invention);

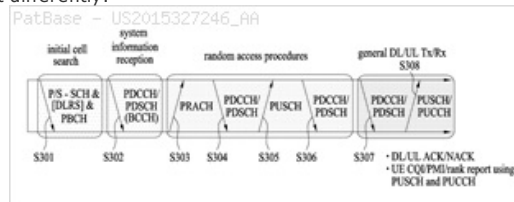
H04L1/00 H04L25/03 (Advanced/Non-invention)

CPC: H04W72/0413 H04B7/0626 H04B7/0417 H04L5/0023

H04L5/0057 H04B7/0632 H04B7/0639 H04L1/0026 H04L1/0031

H04L25/03898

US: 370/329



Family:

Publication number	Publication date	Application number	Application date
CN104854902 A	20150819	CN201380064282	20131204
EP2930968 A1	20151014	EP20130860919	20131204
EP2930968 A4	20160713	EP20130860919	20131204
US2015327246 AA	20151112	US20130443321	20131204
US9763232 BB	20170912	US20130443321	20131204
WO14088307 A1	20140612	WO2013KR11148	20131204

Priority:

US20120735048P 20121209 US20130443321 20131204 WO2013KR11148 20131204

Probable Assignee: LG ELECTRONICS INC

Assignee(s): (std): LG ELECTRONICS INC ; LG ELECTRONICS LTD

Inventor(s): (std): KIM HYUNGTAEE ; KIM KIJUN ; KIM YOUNGTAE ; PARK JONGHYUN

Agent(s): FRENKEL MATTHIAS ALEXANDER; LEE HONG DEGERMAN KANG WAIMEY; KIM YONG IN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

12) Family number: 56965539 (US2014307645A)

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Title: ADAPTIVE LINK ADAPTATION FOR WIRELESS COMMUNICATIONS

Abstract: Source: US2014307645A [EN] A wireless communication system is presented in which subframe-specific link adaptation is performed. A mobile device can transmit a signal that informs a base station whether a particular subframe was received successfully. Additionally the mobile device can calculate channel state information (CSI) for a subframe and report the CSI to a base station. The reported CSI may or may not include an indicator for informing the base station about from which type of subframe the CSI was derived. The base station can receive the signal, the CSI and/or the indicator. Based on what information the base station has received, it performs subframe-specific BLER filtering and subframe-specific link adaptation scheduling and MCS adjustments.

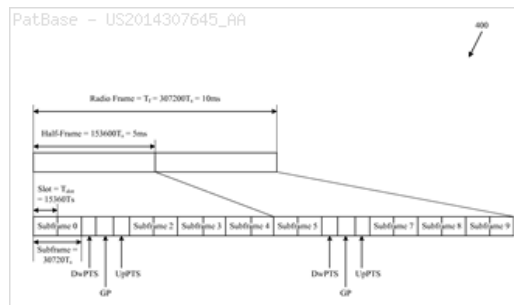
Classifications:

International (IPC 8-9): H04L1/00 H04L1/20

H04L5/00 (Advanced/Invention)

CPC: H04L5/0053 H04L5/0055 H04L1/0003 H04L1/0009 H04L1/0019 H04L1/203

US: 370/329



Family:

Publication number	Publication date	Application number	Application date
TW201434288 A	20140901	TW20140102152	20140121
TWI538433 B	20160611	TW20140102152	20140121
US2014307645 AA	20141016	US20140157509	20140116
US9712306 BB	20170718	US20140157509	20140116
WO14113760 A1	20140724	WO2014US12208	20140120

Priority:

US20130754929P 20130121 US20140157509 20140116

Probable Assignee: APPLE INC**Assignee(s):** (std): APPLE INC**Inventor(s):** (std): DAMJI NAVID ; JI ZHU ; SEBENI JOHNSON ; SEBENI JOHNSON O**Agent(s):** MEYERTONS HOOD KIVLIN KOWERT AND GOETZEL PC; FRANKS ROSS L**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**13) Family number: 41773742 (US2009306741A)**

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Title: SYSTEMS AND METHODS FOR ALTERING BRAIN AND BODY FUNCTIONS AND FOR TREATING CONDITIONS AND DISEASES OF THE SAME**Abstract:** Source: US2009306741A [EN] The present invention relates to systems and methods for management of brain and body functions and sensory perception. For example, the present invention provides systems and methods of sensory substitution and sensory enhancement (augmentation) as well as motor control enhancement. The present invention also provides systems and methods of treating diseases and conditions, as well as providing enhanced physical and mental health and performance through sensory substitution, sensory enhancement, and related effects.**Classifications:****International (IPC 8-9):** A61B5/11 A61N1/00 A61N1/34

A61N1/36 (Advanced/Invention);

A61B5/11 A61N1/00 A61N1/32 A61N1/36 (Core/Invention)

CPC: A61N1/36103 A61N1/36025 A61N1/36082 A61N1/37282

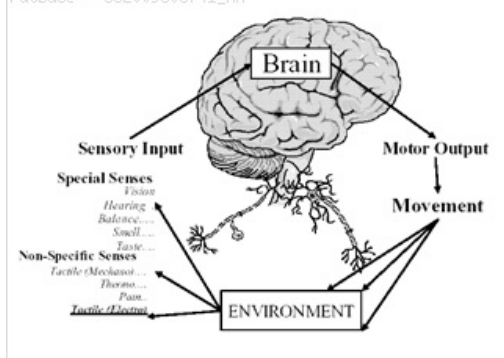
G06F3/011 G06F3/013 G06F3/015

European: A61N1/36Z A61N1/36Z3E A61N1/36Z3G G06F3/01B

G06F3/01B4 G06F3/01B8 K61N1/36E K61N1/372D8R

US: 600/595 600/595S 607/54 607/54P

PatBase - US2009306741_AA

**Family:**

Publication number	Publication date	Application number	Application date
EP2081636 A2	20090729	EP20070854447	20071026
EP2081636 A4	20101222	EP20070854447	20071026
US2009306741 AA	20091210	US20070925391	20071026
WO08052166 A2	20080502	WO2007US82681	20071026
WO08052166 A3	20080703	WO2007US82681	20071026
WO08052166 C2	20080904	WO2007US82681	20071026

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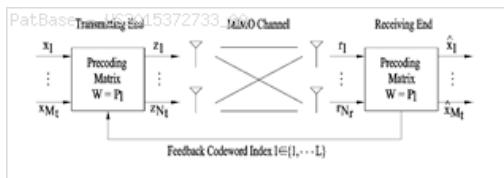
US20060854676P 20061026 US20070925391 20071026 WO2007US82681 20071026

Probable Assignee: WICAB INC**Assignee(s):** (std): HOGLE RICHARD ; LEDERER SCOTT ; WICAB INC**Inventor(s):** (std): HOGLE RICHARD ; LEDERER SCOTT**Agent(s):** GLAWE DELFS MOLL; CASIMIR JONES SC; SISK TYLER J ET AL**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**14) Family number: 57268014 (US2015372733A)**

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Title: METHOD FOR EFFICIENTLY TRANSMITTING SIGNAL IN MULTI-ANTENNA WIRELESS COMMUNICATION SYSTEM AND APPARATUS FOR SAME**Abstract:** Source: US2015372733A [EN] The present invention relates to a method for a transmitting end efficiently transmitting a signal in a wireless communication system supporting a multi-antenna and an apparatus for same. More particularly, the method comprises a step of transmitting a downlink signal based on a precoding matrix (W) for an antenna comprising a plurality of antenna elements aligned perpendicularly, wherein the precoding matrix (W) corresponds to a codebook configured so that phase increase is limited with respect to a plurality of precoding vector values populating a same column.**Classifications:****International (IPC 8-9):** H04B7/02 H04B7/04 H04B7/06

H04B7/155 (Advanced/Invention)

CPC: H04B7/0482 H04B7/0404 H04B7/0626 H04B7/0456**US:** 1/1 375/267**Family:**

Publication number	Publication date	Application number	Application date
US2015372733 AA	20151224	US20140765794	20140225
US9258045 BB	20160209	US20140765794	20140225
WO14129871 A1	20140828	WO2014KR01512	20140225

Priority:

US20130769147P 20130225 US20130774569P 20130307 WO2014KR01512 20140225
US20140765794 20140225

Probable Assignee: LG ELECTRONICS INC

Assignee(s): (std): LG ELECTRONICS INC

Inventor(s): (std): CHAE HYUKJIN ; KIM KIJUN ; KIM YOUNGTAE ; PARK JONGHYUN

Agent(s): LEE HONG DEGERMAN KANG AND WAIMEY; KIM YONG IN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

15) Family number: 30608738 (US2004133095A)

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Title: METHODS AND DEVICES FOR DETECTING ABNORMAL TISSUE CELLS

Abstract: Source: US2004133095A [EN] Devices and methods are provided for identifying tissue cells, such as cancerous cells. The device can include a swallowable capsule having a detector. A patient can be given a substance which includes a marker material (such as a radioactive marker or a magnetic marker material), and which substance can be preferentially bound to or otherwise associated with the particular cell type.

Classifications:

International (IPC 8-9): A61B10/00 A61B5/00 A61B5/05 A61B5/07 A61B6/00 A61J3/07 A61K49/00 A61K51/00

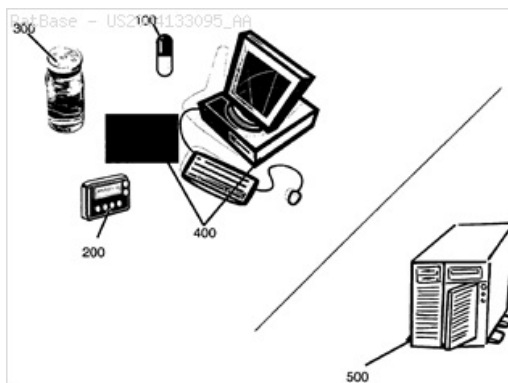
G01T1/161 (Advanced/Invention);
H04L1/00 (Advanced/Non-invention);
A61B (Subclass/Invention)

International (IPC 1-7): A61B5/00 A61B5/05 A61B6/00

CPC: A61B6/508 A61B1/041 A61B5/00 A61B5/417 A61B5/4255 A61B6/425 A61B6/4258 H04L1/004

European: A61B1/04C A61B5/00 A61B5/41J6 A61B5/42K12 A61B6/42B10 A61B6/42B12 T04L1/00B

US: 424/9.34 424/9.340S 600/407 600/407P 600/431 600/431P 600/431S 600/436 600/436S 977/875 977/875S 977/906 977/906S 977/920 977/920S



Family:

Publication number	Publication date	Application number	Application date
AU2003302020 AA	20040615	AU20030302020	20031114
AU2003302020 BB	20080131	AU20030302020	20031114
CA2505743 AA	20050511	CA20032505743	20031114
EP1565107 A2	20050824	EP20030808412	20031114
EP1565107 A4	20080305	EP20030808412	20031114
JP2006509537 T2	20060323	JP20040553719T	20031114
US2004133095 AA	20040708	US20030713407	20031114
US2004138558 AA	20040715	US20030713637	20031114
WO04045374 A2	20040603	WO2003US36510	20031114
WO04045374 A3	20040812	WO2003US36510	20031114

Priority:

US20020426211P 20021114 US20030713407 20031114 US20030713637 20031114
WO2003US36510 20031114

Probable Assignee: ETHICON ENDO SURGERY INC

Assignee(s): (std): AVIDOR YOAV ; DUNKI JACOBS ROBERT J ; ETHICON ENDO SURGERY INC ; WEIR MICHAEL P

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

16) Family number: 61132802 (US2017113046A)

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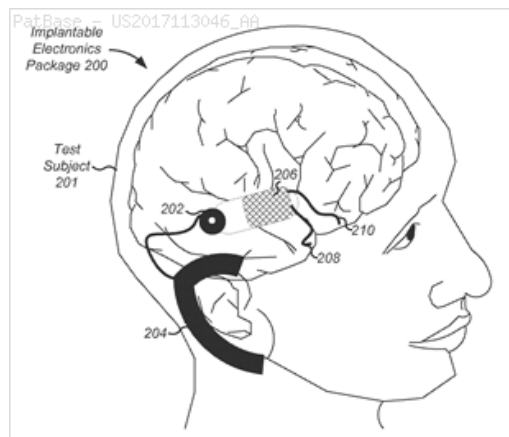
Title: SYSTEMS AND METHODS FOR RESTORING COGNITIVE FUNCTION

Abstract: Source: US2017113046A [EN] Systems and methods for restoring cognitive function are disclosed. In some implementations, a method includes, at a computing device, separately stimulating one or more of lateral and medial entorhinal afferents and other structures connecting to a hippocampus of an animal subject in accordance with a plurality of predefined stimulation patterns, thereby attempting to restore object-specific memories and location-specific memories; collecting a plurality of one or more of macro- and micro-recordings of the stimulation of hippocampal/entorhinal cortical

(HEC) system; and refining the computational model for restoring individual memories in accordance with a portion of the plurality of one or more of macro- and micro-recordings.

Classifications:

International (IPC 8-9): A61B5/00 A61B5/0478 A61B5/055
A61N1/05 A61N1/36 A61N1/372 G06F19/00 (Advanced/Invention)
CPC: A61B5/0476 A61B5/4064 A61N1/36092 A61N1/36125
A61N1/37229 A61N1/36082 A61B5/0478 A61B5/055 A61B5/4094
A61B5/4836 A61B5/6868 A61N1/0531 A61N1/0534 A61N1/36139
G06F19/3437 G06F19/3481 A61N1/025 G16H50/50
US: 607/45



Family:

Publication number	Publication date	Application number	Application date
EP3151908 A1	20170412	EP20150806123	20150609
JP2017521129 T2	20170803	JP20160572320T	20150609
US2017113046 AA	20170427	US20150317319	20150609
WO15191628 A1	20151217	WO2015US34962	20150609

Priority:

US20140009884P 20140609 US20150317319 20150609 WO2015US34962 20150609

Probable Assignee: UNIV CALIFORNIA

Assignee(s): (std): UNIV CALIFORNIA

Assignee(s): THE UNIV OF CALIFORNIA

Inventor(s): (std): FRIED ITZHAK ; MARKOVIC DEJAN ; SUTHANA NANTHIA

Agent(s): EISENFUEHR SPEISER; INABA YOSHIYUKI; CRISMAN DOUGLAS J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

17) Family number: 32625825 (US2006034383A)

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Title: SYSTEMS AND METHODS FOR CODING IN BROADBAND WIRELESS COMMUNICATION SYSTEMS TO ACHIEVE MAXIMUM DIVERSITY IN SPACE, TIME AND FREQUENCY

Abstract: Source: US2006034383A [EN] Maximum diversity in multiple antenna distributed frequency broadband systems such as MIMO-OFDM is achievable through space-frequency (SF) and space-time-frequency (STF) coding. Full-rate full-diversity coding is achieved through a combination of maximal minimum product distance symbol set design and formation of codeword blocks. Full-diversity codes are also achieved which have reduced symbol transmission rates, such as through mapping of space-time (ST) codes to SF codes. The reduction in symbol rate may be offset by the fact that any ST code may be mapped to a full-diversity SF code.

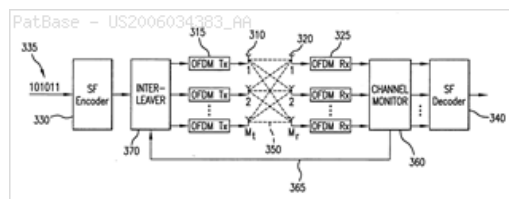
Classifications:

International (IPC 8-9): H04B7/02 H04K1/10
H04L1/02 (Advanced/Invention);
H04B7/02 H04K1/10 H04L1/02 (Core/Invention)

CPC: H04B7/0667 H04B7/068 H04L1/0606 H04L1/0637

European: H04B7/06C2 H04B7/06C4 H04L1/06F H04L1/06T7

US: 375/260 375/267



Family:

Publication number	Publication date	Application number	Application date
US2006034383 AA	20060216	US20050137589	20050526
US7720168 BB	20100518	US20050137589	20050526

Priority:

US20040574468P 20040526 US20050137589 20050526

Probable Assignee: MARYLAND UNIV OF

Assignee(s): (std): LIU K J R ; SAFAR ZOLTAN ; SU WEIFENG ; UNIV MARYLAND

Assignee(s): UNIVERSITY OF MARYLAND ; MARYLAND UNIV ; MARYLAND UNIV OF ; OF MARYLAND UNIV

Inventor(s): (std): LIU K J R ; LIU K J RAY ; SAFAR ZOLTAN ; SU WEIFENG

Inventor(s): LIU KJ ; LIU KJ R ; LIU KJ RAY

Agent(s): ROSENBERG KLEIN AND LEE