



Introducing the new Espacenet



Johannes Schaaf, Roland Feinäugle



Patent Information Marketing



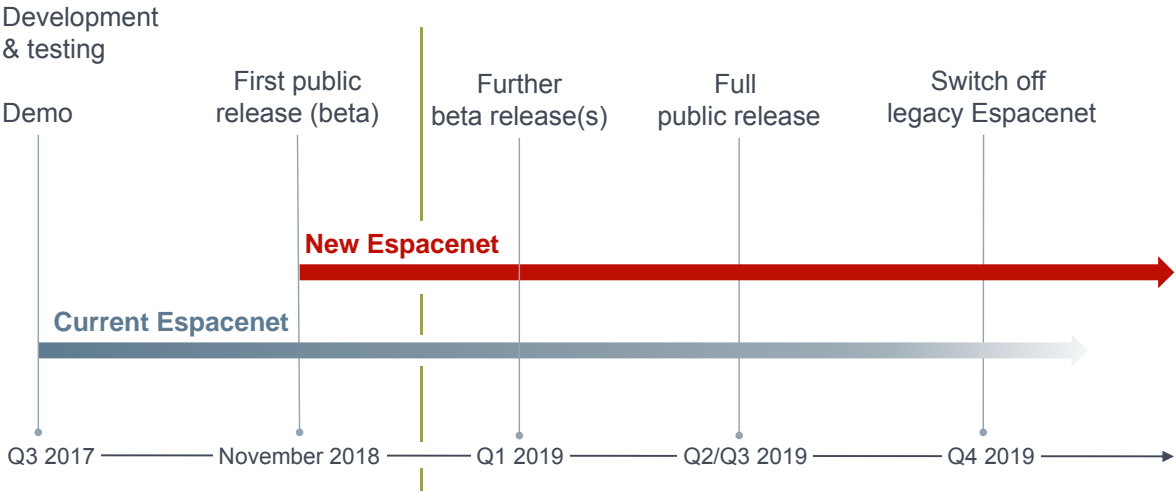
6 March 2019

Content

- **New Espacenet project**
- Search
- Data analysis & processing
- Advanced features
- User support
- Responsive design

New Espacenet project - Timeline

What to expect in 2018 / 2019



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What is new?

- Interface
- Search
- Navigation

and also:

- Machinery behind the GUI

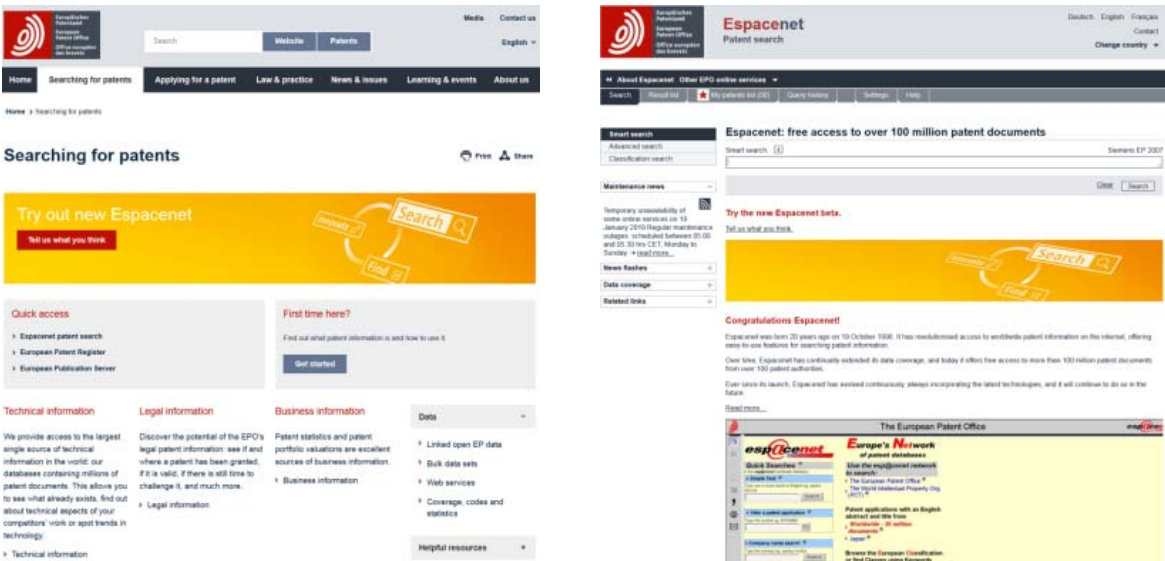
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Benefits

- Smart search at all time
- Searching in all collections at once
- Full-text searching per default
- Better result list; e.g. drawings
- Simultaneous result and detail analysis
- Fit for different devices
- New field identifiers
- Modular and synchronised advanced search
- Filters

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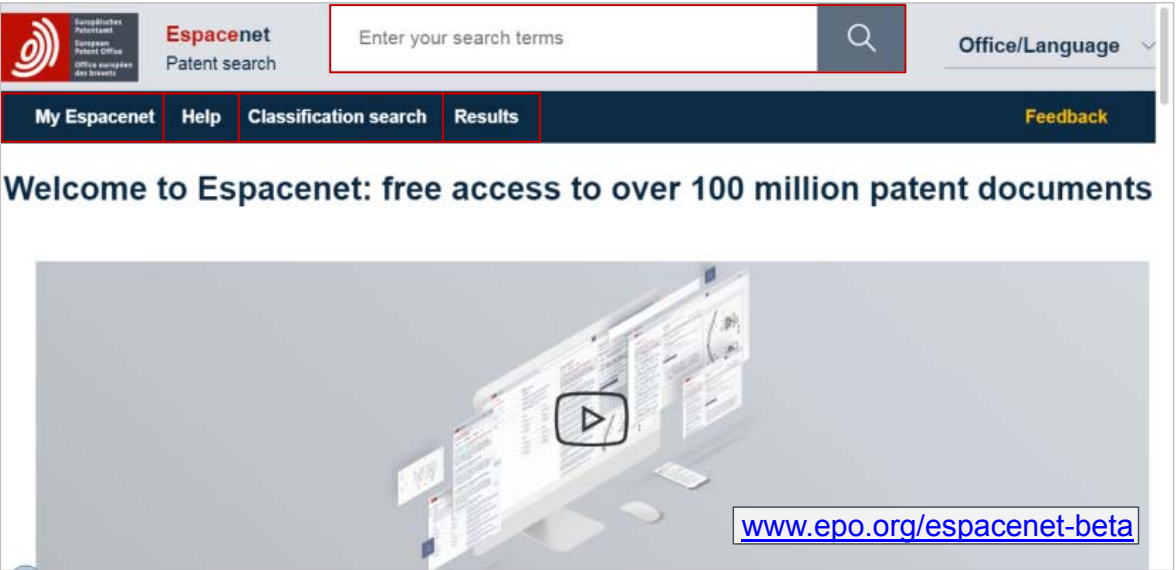
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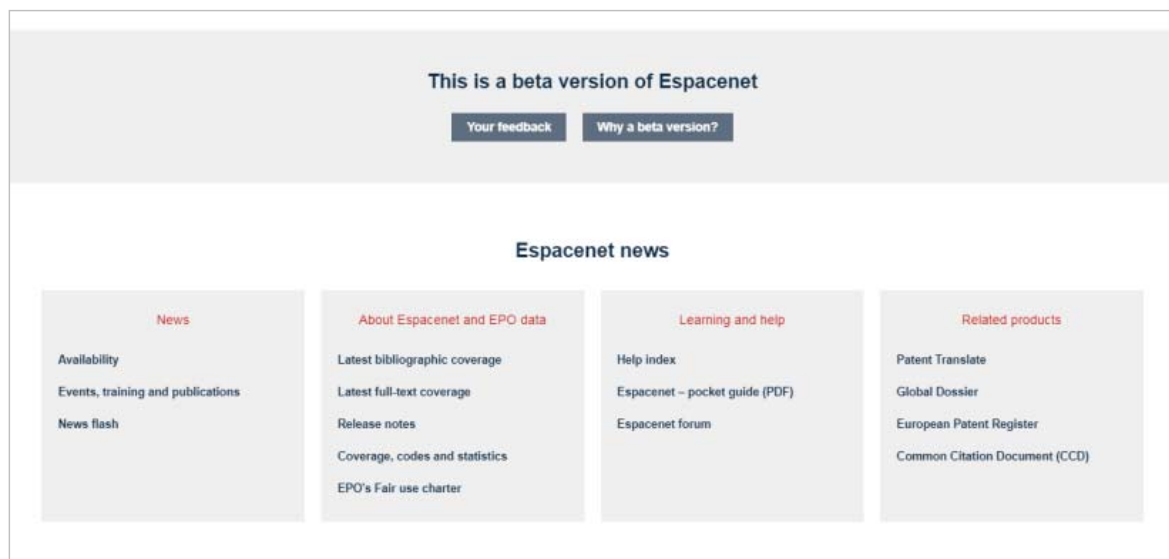
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- **Search**
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Smart search



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Results



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Ranking




☐ 1. **Laser** device having **laser** beam energy control.
EP0069381A1 • SUMITOMO ELECTRIC INDUSTRIAL LTD.
Earliest priority: 1981-07-06 • Earliest publication: 1981-07-06
A **laser** device has a **pulse** controlled **laser** oscillator. Said **laser** device includes means for setting **pulse** width, **pulse** period and **pulse** number and generating a control **pulse** signal having the


☐ 2. **Laser** control device with interval timer.
EP0065223A1 • SUMITOMO ELECTRIC INDUSTRIAL LTD.
Earliest priority: 1981-05-08 • Earliest publication: 1981-05-08
A **laser** control device (4) includes a **pulse** repetition interval timer (4d) and a **pulse** width timer (4b) that, upon each setting, directs one **pulse** having a predetermined **pulse** width to a **laser**

☐ 3. **Stromversorgung für eine Laserblitzlampe**
DE4313231A1 • BAASEL CARL LASERTECH GMBH







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Classification symbol

Title and description



☐ A

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CHEMISTRY; METALLURGY

S

☐ D

TEXTILES; PAPER

S

☐ E

FIXED CONSTRUCTIONS

S

☐ F

MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING

S

☐ G

PHYSICS

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☐ H

ELECTRICITY

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GENERAL TAGGING OF NEW TECHNOLOGICAL DEVELOPMENTS; GENERAL TAGGING OF CROSS-SECTIONAL TECHNOLOGIES SPANNING OVER SEVERAL SECTIONS OF THE IPC; TECHNICAL SUBJECTS COVERED BY FORMER USPC CROSS-REFERENCE ART COLLECTIONS [XRACs] AND DIGESTS

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☐ 1. Laser device having laser beam energy control.

EP0069381A1 • SUMITOMO ELECTRIC INDUSTRIES [JP]

Earliest priority: 1981-07-06 • Earliest publication: 1983-01-12

A laser device has a pulse controlled laser oscillator. Said laser device includes means for setting pulse width, pulse period and pulse number and generating a control pulse signal having the set pulse width, the set pulse

☐ 2. Laser control device with interval timer.

EP0065223A1 • SUMITOMO ELECTRIC INDUSTRIES [JP]

Earliest priority: 1981-05-08 • Earliest publication: 1982-11-11

A laser control device (4) includes a pulse repetition interval timer (4d) and a pulse width timer (4b) that, upon each setting, directs one pulse having a predetermined pulse width to a laser system (5) that emits a laser beam in

☐ 3. Stromversorgung für eine Laserblitzlampe

DE4313231A1 • BAASEL CARL LASERTECH [DE]

Earliest priority: 1993-04-22 • Earliest publication: 1994-10-26

No abstract available

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☐ 1. Laser device having laser beam

EP0069381A1 • SUMITOMO ELECTRIC CORP. [JP]

Earliest priority: 1981-07-06 • Earliest publication: 1982-11-12

A laser device has a pulse controlled laser beam. The device includes means for setting pulse width, frequency and generating a control pulse signal having a predetermined pulse width.

☐ 2. Laser control device with internal

EP0065223A1 • SUMITOMO ELECTRIC CORP. [JP]

Earliest priority: 1981-05-08 • Earliest publication: 1982-11-11

A laser control device (4) includes a pulse repetition interval timer (4d) and a pulse width timer (4b) that, upon each setting, directs one pulse having a predetermined pulse width to a laser system (5) that emits a laser beam in a predetermined direction.

☐ 3. Stromversorgung für eine Laserblitzlampe

DE4313231A1 • BAASEL CARL LASERTECH [DE]

Earliest priority: 1993-04-22 • Earliest publication: 1994-10-26

No abstract available

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☒ 5. Method for operating a pulsed laser with a

DE3305145A1 • ROFIN SINAR LASER GMBH [DE]

Earliest priority: 1983-02-15 • Earliest publication: 1983-12-01

For the optimum utilisation of the peak pulse power of a pulsed laser during the superpulse, it is necessary simultaneously to energise several paths, which are arranged one behind the other, of a laser resonator.

☒ 7. Method for energising pulse lasers which operate with vapours of

DE3219919A1 • INST OPTIKI ATMOSFERY SIB OTDE [SU]

Earliest priority: 1982-05-27 • Earliest publication: 1983-12-01


In a method for energising pulse lasers which operate with vapours of chemical materials, and in the pulse laser for implementing this method, the periodically sequential energising pulses which are supplied from the main power source are controlled so that the pulse width of each pulse is

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1.Method for operating a pulsed laser with a plurality of gas-disc...

DE3305145A1 • ROFIN SINAR LASER GMBH [DE]

Earliest priority: 1983-02-15 • Earliest publication: 1984-08-16

For the optimum utilisation of the peak pulse power of a laser, especially during the superpulse, it is necessary simultaneously to trigger gas-discharge paths, which are arranged one behind the other, of a laser. This is made possible by a current


2.Method for energising pulse lasers which operate with vapours...

DE3219919A1 • INST OPTIKI ATMOSFERY SIB OTDE [SU]

Earliest priority: 1982-05-27 • Earliest publication: 1983-12-01

In a method for energising pulse lasers which operate with vapours of chemical materials, and in the pulse laser for implementing this method, the periodically sequential energising pulses which are supplied from the main energising pulse

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EP0069381A1

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1.Method for operating a pulsed laser with a plurality of gas-d...

DE3305145A1 • ROFIN SINAR LASER GMBH [DE]

Earliest priority: 1983-02-15 • Earliest publication: 1984-08-16

For the optimum utilisation of the peak pulse power of a laser, especially during the superpulse, it is necessary simultaneously to trigger gas-discharge paths, which are arranged one behind the other, of a laser. This is made possible by a current

2.Method for energising pulse lasers which operate with vapours...

DE3219919A1 • INST OPTIKI ATMOSFERY SIB OTDE [SU]

Earliest priority: 1982-05-27 • Earliest publication: 1983-12-01

In a method for energising pulse lasers which operate with vapours of chemical materials, and in the pulse laser for implementing this method, the periodically sequential energising pulses which are supplied from the main energising pulse

3.Laser device having laser beam energy control.

EP0069381A1 • SUMITOMO ELECTRIC INDUSTRIES [JP]

Earliest priority: 1981-07-06 • Earliest publication: 1983-01-12

A laser device has a pulse controlled laser oscillator. Said laser device includes means for setting pulse width, pulse period and pulse number and

★ EP0069381A1 Laser device having laser beam energy control.

Also published as

Patent Translate

Bibliographic data

Register

Inventors: HIRAMOTO JUNICHI C O OSAKA WORK, TAKENAKA SHINYA C O OSAKA WORK

Applicants: SUMITOMO ELECTRIC INDUSTRIES [JP]

Classification:

IPC: H01S3/097; H01S3/10; H01S3/102; H01S3/104

CPC: default: H01S3/10; H01S3/104

Application number: EP82106001A Global Dossier

Priority numbers: JP10531881 19810708

Publication date: 1983-01-12

Filing date: 1982-07-05

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1. Laser device having laser beam energy control

EP0069381A1 • SUMITOMO ELECTRIC INDUSTRIES [JP]

Earliest priority: 1981-07-06 • Earliest publication: 1983-01-12

A laser device has a pulse controlled laser oscillator (1) which generates a control pulse signal having the same pulse width as the pulse signal of the laser oscillator (1).

2. Laser control device with interval timer

EP0065223A1 • SUMITOMO ELECTRIC INDUSTRIES [JP]

Earliest priority: 1981-05-08 • Earliest publication: 1982-11-11

A laser control device (4) includes a pulse repetition interval timer (4d) and a pulse width timer (4b) that, upon each setting, directs one pulse having a predetermined pulse width to a laser system (5) that emits a laser beam in a predetermined direction.

3. Stromversorgung für eine Laserblitzlampe

DE4313231A1 • BAASEL CARL LASERTECH [DE]

Earliest priority: 1993-04-22 • Earliest publication: 1994-10-26

No abstract available

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No	Title	Inventors	Applicants	Publication number	Earliest priority	CPC	IPC	Publication date	Earliest publication	Family number
1	1. Laser device having laser beam energy control.	HIRAMOTO JUNICHI C O OSAKA WORK TAKENAKA SHINYA C O OSAKA WORK	SUMITOMO ELECTRIC INDUSTRIES [JP]	EP0069381A1	1981-07-06	H01S3/10 H01S3/104	H01S3/097 H01S3/10 H01S3/102 H01S3/104	1983-01-12 1985-11-13	1983-01-12	014404354
2	2. Laser control device with interval timer.	TAKENAKA SHINYA C O OSAKA WORK	SUMITOMO ELECTRIC INDUSTRIES [JP]	EP0065223A1	1981-05-08	A61B18/20 H01S3/10 H01S3/104	A61B18/20 H01S3/097 H01S3/10 H01S3/104 A61B17/00	1982-11-24 1985-09-04	1982-11-11	013367081
3	3. Stromversorgung für eine Laserblitzlampe	LANGHANS LUTZ [DE] MANN OLAF [DE] SEIFERT WOLFGANG [DE]	BAASEL CARL LASERTECH [DE]	DE4313231A1	1993-04-22	H01S3/092 H01S3/1022	B23K26/00 H01S3/092 H01S3/102	1994-10-27	1994-10-26	006486134
4	4. PULSE LASER WITH PULSE ENERGY TRIMMER	SANDSTROM RICHARD L [US]	CYMER INC [US]	EP0998773A1	1997-07-21	H01S3/0057	H01S3/00 H01S3/097 H01S3/115 H01S3/137 G02F1/03	2000-05-10 2005-04-13 2007-01-10	1998-12-22	025408228

Query

Results

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2. Patent search

3. 2311 results found for [pulse* or impuls*] | laser* H01S3/097


4. Results 1 to 500 displayed

5. Query language: en / de / fr

6. Filters:

7. Please find the results in a separate sheet

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(self or autonom*) driv* assistance* pn=EP 2015:2018

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EP3264211A1

DRIVING ASSISTANCE APPARATUS AND DRIVING ASSISTANCE METHOD

Also published asPatent Translate

Bibliographic dataDescriptionClaimsDrawingsOriginal documentCitationsLegal statusPatent family

1 MAP INFORMATION STORAGE DEVICE, AUTOMATIC DRIVING CONTROL DEVICE, CONTROL METHOD, PROGRAM, AND STORAGE MEDIUM

EP3276587A1 • INCREMENT P CORP [JP]

Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29

A server device 2 stores a distribution map DB 21 including autonomous driving regulatory information Ir for regulating autonomous driving. A driving assistance device 1, then, the driving assistance device 1 receives the map data D1.

2 AUTOMATIC DRIVING ASSISTANCE DEVICE, CONTROL METHOD, PROGRAM, AND STORAGE MEDIUM

EP3276586A1 • INCREMENT P CORP [JP]

Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29

A driving assistance device 1 performs autonomous driving based on an output from a sensor unit 13 that acquires information. autonomous driving determination table T) based on autonomous driving compatibility information.

3 DRIVING ASSISTANCE APPARATUS AND DRIVING ASSISTANCE METHOD

EP3264211A1 • PANASONIC IP MAN CO LTD [JP]

Earliest priority: 2016-06-28 • Earliest publication: 2017-12-28

Provided is a method for use by a driving assistance apparatus that assists a transition from an autonomous driving mode in which a vehicle is driven under autonomous control to a manual driving mode in which the vehicle is driven by a driver.

4 IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICLE, AND METHOD FOR CONTROLLING AUTONOMOUS DRIVING

EP3220370A1 • MITSUBISHI ELECTRIC CORP [JP]

Earliest priority: 2014-10-30 • Earliest publication: 2016-05-06

An autonomous driving display system (3969) includes: an autonomous driving control device (3300) to carry out autonomous driving; an autonomous driving control device (3300) to carry out autonomous driving; and a driver assistance system (3969) to assist a driver in driving a vehicle.

Inventors: KUSUMOTO YOSHIFUMI [JP]

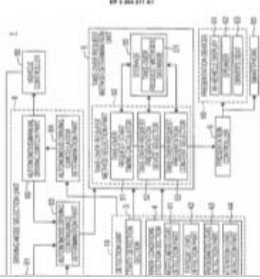
Applicants: PANASONIC IP MAN CO LTD [JP]

Classification:
IPC: B60W40/08; B60W50/14; G05D1/00
CPC: default: B60K28/06; B60W40/08; B60W50/14; G05D1/0081; B60W30/182; B60W40/09; B60W40/09; B60C23/00942; B60K23/00945; B60W2040/0827; B60W2040/0872; B60W2050/0072; B60W2050/0072

Application number: EP17173443A Global Dossier

Priority numbers: JP2016127972 20160628

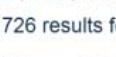
Publication date: 2018-01-03
Filing date: 2017-05-30
Revised date: 2018-06-26



European Patent Office

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Bibliographic data



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(self or autonom*) driv* assistance* pn=EP 2015:2018

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EP3276587A1

MAP INFORMATION STORAGE DEVICE, AUTOMATIC DRIVING CONTROL DEVICE, CONTROL METHOD, PROGRAM, AND STORAGE MEDIUM

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1 MAP INFORMATION STORAGE DEVICE, AUTOMATIC DRIVING CONTROL DEVICE, CONTROL METHOD, PROGRAM, AND STORAGE MEDIUM

EP3276587A1 • INCREMENT P CORP [JP]

Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29

A server device 2 stores a distribution map DB 21 including autonomous driving regulatory information Ir for regulating autonomous driving. A driving assistance device 1, then, the driving assistance device 1 receives the map data D1.

2 AUTOMATIC DRIVING ASSISTANCE DEVICE, CONTROL METHOD, PROGRAM, AND STORAGE MEDIUM

EP3276586A1 • INCREMENT P CORP [JP]

Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29

A driving assistance device 1 performs autonomous driving based on an output from a sensor unit 13 that acquires information. autonomous driving determination table T) based on autonomous driving compatibility information.

3 DRIVING ASSISTANCE APPARATUS AND DRIVING ASSISTANCE METHOD

EP3264211A1 • PANASONIC IP MAN CO LTD [JP]

Earliest priority: 2016-06-28 • Earliest publication: 2017-12-28

Provided is a method for use by a driving assistance apparatus that assists a transition from an autonomous driving mode in which a vehicle is driven under autonomous control to a manual driving mode in which the vehicle is driven by a driver.

4 IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICLE, AND METHOD FOR CONTROLLING AUTONOMOUS DRIVING

EP3220370A1 • MITSUBISHI ELECTRIC CORP [JP]

Earliest priority: 2014-10-30 • Earliest publication: 2016-05-06

An autonomous driving display system (3969) includes: an autonomous driving control device (3300) to carry out autonomous driving; an autonomous driving control device (3300) to carry out autonomous driving; and a driver assistance system (3969) to assist a driver in driving a vehicle.

Inventors: HATANO MAKOTO [JP], KODA TAKESHI [JP], MITO KENJI [JP], NAKAO KAZUHIRO [JP]

Applicants: INCREMENT P CORP [JP], PIONEER CORP [JP]

Classification:
IPC: G08G1/09
CPC: default: G01C21/32; G01C21/3658; G05D1/0088; G05D1/0274; G05D1/0285; G08G1/09; G08G1/09

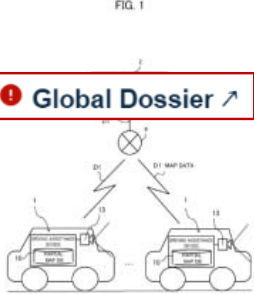
Application number: EP16766777A Global Dossier

Priority numbers: JP2015058883 20150324

Publication date: 2018-01-31
Filing date: 2016-03-22
Priority date: 2015-03-24

Published as: US2018113474A1; JPWO2016152874A1; EP3276587A1; WO2016151730A1; CN107533800A; WO2016152874A1

Abstract:
A server device 2 stores a distribution map DB 21 including autonomous driving regulatory information Ir for regulating autonomous driving.



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Description

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- 1 MAP INFORMATION STORAGE DEVICE, AUTOMATIC DRIVE ASSISTANCE APPARATUS AND DRIVING ASSISTANCE SYSTEM
- EP3276587A1 • INCREMENT P CORP [JP]
- Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29
- A server device 2 stores a distribution map DB 21 including autonomous driving regulatory information I for regulating autonomous driving... a driving assistance device 1. Then, the driving assistance device 1 receives the map data D1.
- 2 AUTOMATIC DRIVING ASSISTANCE DEVICE, CONTROL UNIT, AND METHOD FOR CONTROLLING THE SAME
- EP3276586A1 • INCREMENT P CORP [JP]
- Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29
- A driving assistance device 1 performs autonomous driving based on an output from a sensor unit 13 that acquires information... autonomous driving determination table T1 based on autonomous driving compatibility information.
- 3 DRIVING ASSISTANCE APPARATUS AND DRIVING ASSISTANCE SYSTEM
- EP3264211A1 • PANASONIC IP MAN CO LTD [JP]
- Earliest priority: 2016-06-28 • Earliest publication: 2017-12-28
- Provided is a method for use by a driving assistance apparatus that assists a transition from an autonomous driving mode in which a vehicle is driven under autonomous control to a manual driving mode in which the vehicle is driven manually.
- 4 IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICLE, AUTOMATICALLY DRIVEN VEHICLE MONITORING DEVICE, ROAD MANAGEMENT DEVICE, AND COLLECTION DEVICE
- EP3220370A1 • MITSUBISHI ELECTRIC CORP [JP]
- Earliest priority: 2014-10-10 • Earliest publication: 2016-05-06
- An autonomous driving display system (3069) includes: an autonomous driving control device (3300) to carry out autonomous driving; an autonomous... (3500) to make the autonomous driving control device (3300) carry out autonomous driving.
- 5 DRIVER ASSISTANCE SYSTEM AND METHOD
- EP322204A1 • BAYERISCHE MOTOREN WERKE AG [DE]
- Earliest priority: 2016-11-11 • Earliest publication: 2018-05-16
- The present invention relates to a driver assistance system for improving the availability and reliability in vehicles operating in an autonomous driving mode.

EP3220370A1 IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICLE, AUTOMATIC DRIVE ASSISTANCE SYSTEM, AUTOMATIC DRIVING MONITORING DEVICE, ROAD MANAGEMENT DEVICE, AND COLLECTION DEVICE

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Description
Claims
Drawings
Original document
Citations
Legal status
Patent family

Technical Field
[0001] The present invention relates to an in-vehicle device, an autonomous vehicle, an autonomous driving assistance system, an autonomous driving monitoring device, a road management device, and an autonomous driving information gathering device.

Background Art
[0002] An autonomous driving enabled vehicle capable of carrying out autonomous driving includes a large number of sensors such as cameras, lasers, and radars mounted thereon to detect and observe the surroundings of the vehicle and determines presence or absence of obstacles such as vehicles, humans, and structures around the vehicle.

[0003] The autonomous driving enabled vehicle also determines a future position obtained from the current position and the vehicle speed through map matching of the vehicle speed pulses and the moving speed of the vehicle and received GPS signals with navigation map data. The autonomous driving enabled vehicle utilizes sensor information and the position information of the vehicle to carry out autonomous driving (Patent Literatures 1 to 9, for example).

List of Citations/Patent Literature
[0004]

Patent Literature 1 JP 2014-108 771 A
Patent Literature 2 JP 2005-324 661 A
Patent Literature 3 JP 2014-234 89 A
Patent Literature 4 JP 2002-251 690 A
(Published in Japanese on 6, 12, 2005, 2006, 2006, 2006)

Claims

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- #1 MAP INFORMATION STORAGE DEVICE, AUTOMATIC DRIVING ASSISTANCE SYSTEM, AUTOMATIC DRIVE ASSIST SYSTEM, AUTOMATIC DRIVE MONITORING DEVICE, ROAD MANAGEMENT INFORMATION COLLECTION DEVICE
- Also published as Patent Translate
- Bibliographic data Description Claims Drawings Original document Citations Legal status Patent family
- Original claims Claims tree

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    6 --- 11((11))
    6 --- 12((12))
    6 --- 13((13))
    6 --- 14((14))
    6 --- 15((15))
        
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The diagram illustrates a patent claims tree. Claim 1 is the root node, branching into claims 2, 3, 4, and 5. Claim 6 branches into claims 7, 8, 9, 10, 11, 12, 13, 14, and 15.

#1 MAP INFORMATION STORAGE DEVICE, AUTOMATIC DRIVING ASSISTANCE SYSTEM, AUTOMATIC DRIVE ASSIST SYSTEM, AUTOMATIC DRIVE MONITORING DEVICE, ROAD MANAGEMENT INFORMATION COLLECTION DEVICE

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Original claims Claims tree

1. An in-vehicle device installed in an autonomous driving enabled vehicle that is a vehicle capable of carrying out autonomous driving, the in-vehicle device making a display device, display state of which is recognizable from outside the autonomous driving enabled vehicle, display either of an autonomous driving state and a non-autonomous driving state not being the autonomous driving state, the in-vehicle device comprising - a reception unit to receive a determination signal allowing determination on which of the autonomous driving state and the non-autonomous driving state to display on the display device; - a transmission unit, and - a control unit to transmit a display instruction according to the determination signal received by the reception unit to the display device via the transmission unit.

2. The in-vehicle device according to claim 1, wherein the reception unit receives, as the determination signal, a driving state signal indicating the driving state from the autonomous driving enabled vehicle, and the control unit transmits the display instruction associated with the driving state signal received from the reception unit to the display device via the transmission unit.

3. The in-vehicle device according to claim 1 or 2, wherein the reception unit receives, as the determination signal, a switching instruction signal instructing switching to either of autonomous driving and non-autonomous driving not being the autonomous driving, and wherein the control unit transmits the display instruction associated with the switching instruction signal received from the reception unit to the display device via the transmission unit.

Drawings

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1. MAP INFORMATION STORAGE DEVICE, AUTOMATIC DR...

EP3276587A1 • INCREMENT P CORP [JP]

Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29

A server device 2 stores a distribution map DB 21 including autonomous driving regulatory information for regulating autonomous driving... a driving assistance device 1. Then, the driving assistance device 1 receives the map data 21.

2. AUTOMATIC DRIVING ASSISTANCE DEVICE, CONTROL...

EP3276586A1 • INCREMENT P CORP [JP]

Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29

A driving assistance device 1 performs autonomous driving based on an output from a sensor unit 13 that acquires information... autonomous driving determination table T) based on autonomous driving compatibility information.

3. DRIVING ASSISTANCE APPARATUS AND DRIVING ASSI...

EP3264211A1 • PANASONIC IP MAN CO LTD [JP]

Earliest priority: 2016-06-28 • Earliest publication: 2017-12-28

Provided is a method for use by a driving assistance apparatus that assists a transition from an autonomous driving mode in which a vehicle is driven under autonomous control to a manual driving mode in which the vehicle is driven.

4. IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICL...

EP3220370A1 • MITSUBISHI ELECTRIC CORP [JP]

Earliest priority: 2014-10-30 • Earliest publication: 2016-05-06

An autonomous driving display system (3999) includes: an autonomous driving control device (3300) to carry out autonomous driving; an autonomous... (3500) to make the autonomous driving control device (3300) carry out autonomous...

5. DRIVER ASSISTANCE SYSTEM AND METHOD

EP3322204A1 • BAYERISCHE MOTOREN WERKE AG [DE]

Earliest priority: 2016-11-11 • Earliest publication: 2018-05-16

The present invention relates to a driver assistance system for improving the availability and reliability in vehicles operating in an autonomous driving mode. The driver assistance system comprises at least one backend-server. The

EP3220370A1 IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICLE, AUTOMATIC DRIVE ASSIST SYSTEM, AUTOMATIC DRIVE MONITORING DEVICE, ROAD MANAGEMENT DEVICE, AND AUTOMATIC DRIVE INFORMATION COLLECTION DEVICE

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Fig. 1

Fig. 2

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1. MAP INFORMATION STORAGE DEVICE, AUTOMATIC DR...

EP3276587A1 • INCREMENT P CORP [JP]

Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29

A server device 2 stores a distribution map DB 21 including autonomous driving regulatory information for regulating autonomous driving... a driving assistance device 1. Then, the driving assistance device 1 receives the map data 21.

2. AUTOMATIC DRIVING ASSISTANCE DEVICE, CONTROL...

EP3276586A1 • INCREMENT P CORP [JP]

Earliest priority: 2015-03-24 • Earliest publication: 2016-09-29

A driving assistance device 1 performs autonomous driving based on an output from a sensor unit 13 that acquires information... autonomous driving determination table T) based on autonomous driving compatibility information.

3. DRIVING ASSISTANCE APPARATUS AND DRIVING ASSI...

EP3264211A1 • PANASONIC IP MAN CO LTD [JP]

Earliest priority: 2016-06-28 • Earliest publication: 2017-12-28

Provided is a method for use by a driving assistance apparatus that assists a transition from an autonomous driving mode in which a vehicle is driven under autonomous control to a manual driving mode in which the vehicle is driven.

4. IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICL...

EP3220370A1 • MITSUBISHI ELECTRIC CORP [JP]

Earliest priority: 2014-10-30 • Earliest publication: 2016-05-06

An autonomous driving display system (3999) includes: an autonomous driving control device (3300) to carry out autonomous driving; an autonomous... (3500) to make the autonomous driving control device (3300) carry out autonomous...

5. DRIVER ASSISTANCE SYSTEM AND METHOD

EP3322204A1 • BAYERISCHE MOTOREN WERKE AG [DE]

Earliest priority: 2016-11-11 • Earliest publication: 2018-05-16

The present invention relates to a driver assistance system for improving the availability and reliability in vehicles operating in an autonomous driving mode. The driver assistance system comprises at least one backend-server. The

EP3220370A1 IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICLE, AUTOMATIC DRIVE ASSIST SYSTEM, AUTOMATIC DRIVE MONITORING DEVICE, ROAD MANAGEMENT DEVICE, AND AUTOMATIC DRIVE INFORMATION COLLECTION DEVICE

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EUROPEAN PATENT APPLICATION

published in accordance with Art. 153(4) EPC

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(21) Application number: 15854196.1

(22) Date of filing: 30.10.2015

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G08G 40/04 (2006.01) B60W 20/14 (2012.01)

G08G 1/09 (2006.01) G08G 1/16 (2006.01)

(86) International application number:

PCT/JP2015/080654

(87) International publication number:

WO 2016/069273 (06.05.2016 Gazette 2016/18)

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Designated Extension States:

BA ME

Designated Validation States:

MA

(71) Applicant: Mitsubishi Electric Corporation

Chiyoda-ku

Tokyo 100-8310 (JP)

(72) Inventor: TSUDA, Yoshiaki

Tokyo 100-8310 (JP)

(74) Representative: Sajda, Wolf E.

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☆ **EP3264211A1** **DRIVING ASSISTANCE APPARATUS AND DRIVING ASSISTANCE METHOD** Also published as **CCD**

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1 MAP INFORMATION STORAGE DEVICE, AUTOMATIC DRIVING ASSISTANCE APPARATUS, AND DRIVING ASSISTANCE METHOD
EP3276587A1 • INCREMENT P CORP [JP]
 Earliest priority: 2015-03-24 • Earliest publication: 2016-08-20
 A server device 2 stores a distribution map DB 21 including a distribution map DB 21-1 for regulating autonomous driving of a vehicle 1. Then, the driving assistance device 100...

2 AUTOMATIC DRIVING ASSISTANCE APPARATUS AND DRIVING ASSISTANCE METHOD
EP3276586A1 • INCREMENT P CORP [JP]
 Earliest priority: 2015-03-24 • Earliest publication: 2016-08-20
 A driving assistance device 100 includes a sensor unit 13 that acquires information... autonomous driving determination table T) based on autonomous driving compatibility information...

3 DRIVING ASSISTANCE APPARATUS AND DRIVING ASSISTANCE METHOD
EP3264211A1 • PANASONIC IP MAN CO LTD [JP]
 Earliest priority: 2014-03-28 • Earliest publication: 2017-12-28
 Provided is a method for use by a driving assistance apparatus that assists a transition from an autonomous driving mode in which a vehicle is driven under autonomous control to a manual driving mode in which the vehicle is driven under manual control...

4 IN-VEHICLE DEVICE, AUTOMATICALLY DRIVEN VEHICLE, AND DRIVING ASSISTANCE SYSTEM
EP3220370A1 • MITSUBISHI ELECTRIC CORP [JP]
 Earliest priority: 2014-10-30 • Earliest publication: 2016-05-06
 An autonomous driving display system (3099) includes: an autonomous driving control device (3300) to carry out autonomous driving; an autonomous... (3500) to make the autonomous driving control device (3300) carry out autonomous driving...

5 DRIVER ASSISTANCE SYSTEM AND METHOD
EP332204A1 • BAYERISCHE MOTOREN WERKE AG [DE]
 Earliest priority: 2016-11-11 • Earliest publication: 2018-05-16
 The present invention relates to a driver assistance system for improving the availability and reliability in vehicles operating in an autonomous driving mode.

Result list

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Citations

The screenshot shows the Espacenet website interface. At the top, the search bar contains the query "(self or automot*) driv* assistance" pn=EP 2015 2018. The navigation bar includes links for "My Espacenet", "Help", "Classification search", "Results", "Advanced search", "Filters", and "Tools". The breadcrumb trail at the top reads "Home > Results > EP3264211A1 > Cited by: EP3264211A1". A red box highlights this breadcrumb trail. Below the breadcrumb, the "Cited by" section lists three patents:

- ☐ 2. Verfahren und Vorrichtung zur Übernahmeaufforderung einer Fahraufgabe a...
DE102014225680A1 • VOLKSWAGEN AG [DE]
Earliest priority: 2014-12-12
No abstract available
- ☐ 3. Verfahren zur Berechnung einer Rückholzeit
DE102014011264A1 • GM GLOBAL TECH OPERATIONS INC [US]
Earliest priority: 2014-07-28
No abstract available
- ☐ 4. VEHICLE DRIVING ASSISTANCE DEVICE, METHOD, AND PROGRAM
JP2015230573A • ALPINE ELECTRONICS INC
Earliest priority: 2014-06-05
...PROBLEM TO BE SOLVED: To provide a vehicle driving assistance device, method, and program, which allow a driver to prepare in advance when switching from autopilot to manual driving SOLUTION: A vehicle-mounted system 100 includes: a host vehicle position detector...
- ☐ 5. Method for Driver Assistance System of a Vehicle
US2015094899A1 • VOLKSWAGEN AG [DE]
Earliest priority: 2013-10-01
...the driving assistance system is able to control the...

European Patent Office

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Legal status

☆ EP3264211A1

DRIVING ASSISTANCE APPARATUS AND DRIVING ASSISTANCE METHOD

Also published as

Bibliographic data

Description

Claims

Drawings

Original document

Citations

Legal status

Patent family

Event indicator ^	Category ^	Event Description ^	Countries ^	Event date ^	Effective date ^	Details ^
EP AK	W: Other	DESIGNATED CONTRACTING STATES:	AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR	2018-01-03		
EP AV	W: Other	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT IN:	MA MD	2018-01-03		
EP AX	W: Other	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:	BA ME	2018-01-03		
EP 17P	D: Search and examination	REQUEST FOR EXAMINATION FILED		2018-07-25	2018-06-18	
EP RBV	Y: Correction/deletion of event information	DESIGNATED CONTRACTING STATES (CORRECTION)	AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR	2018-07-25		

Patent family

☆ EP3041733A1

SELF-PROPELLED CRAFT

Also published as

Bibliographic data

Description

Claims

Drawings

Original document

Citations

Legal status

Patent family

Simple family

INPADOC family

Simple family

INPADOC family

CCD ^

RSS: Family dossier

Publication	Family	Title	Publication date	Applicants	CPC	IPC	Links
ES2689312T3	Simple	Embarcación autopropulsada	2018-11-13	FUND NORAS [PT]	B63B35/78; B63H23/24; B63B35/7943; B63C11/46; B63C9/082 +3	B63B35/79; B63C11/46; B63C9/08; B63H11/10	
HRP20181334T1	Simple	SELF-PROPELLED CRAFT	2018-11-16	FUND NORAS [PT]	B63B35/78; B63H23/24; B63B35/7943; B63C11/46; B63C9/082 +3	B63B35/79; B63C11/46; B63C9/08; B63H11/10	
IL244073D0	INPADOC		2016-04-21				
JP2016532600A	Simple	自己推進型クラフト	2016-10-20		B63B35/78; B63H23/24	B63C9/02; B63H11/10	Global Dossier ^

“Also published as”

Home > Results > EP3045867B1

1726 results found, 2058 publications

☆ EP3045867B1 A navigation unit and method for providing navigation instructions for an autonomous vehicle

Also published as Patent Translate

EP3045867A1 Description Claims Drawings Original document Citations Legal status Patent family

EP3045867B1

US2016210550A1

CN105806354A

9. A navigation unit and method for providing navigation instructions for an autonomous vehicle configured to be in an autonomous driving mode while in a certified autonomous road. The navigation unit is first configured to determine the autonomous vehicle is driving in an unplanned route or that it is...

10. PARKING ASSISTANCE DEVICE
EP3251884A1 • NISSAN MOTOR [JP]
Earliest priority: 2015-01-28 • Earliest publication: 2016-08-04
A parking assistance device for aligning a vehicle coil (11) mounted on a bottom surface of a vehicle (10) with... the voltage detected, notifies a driver of first braking when the change in the voltage detected shifts from an increasing...

11. METHOD FOR OPERATING A DRIVER ASSISTANCE DEVICE
EP3027457A1 • VALEO SCHALTER & SENSOREN GMBH [DE]
Earliest priority: 2013-07-31 • Earliest publication: 2015-02-05
No abstract available

12. STEERING CONTROL DEVICE FOR WORK VEHICLES
EP3360758A1 • HITACHI CONSTRUCTION MACH CO [JP]
Earliest priority: 2015-10-05 • Earliest publication: 2017-04-13
A steering control device (20) for a working vehicle includes an electric motor device (34) that generates an assistance torque... load torque based upon an output value of the load torque sensor (39), and an assistance torque calculation...

13. METHOD AND SYSTEM FOR SAFE LIMITING OF TORQUE
EP3266680A1 • VOLVO CAR CORP [SE]

FIGURE 1

European Patent Office

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Content

- New Espacenet project
- Search
- Data analysis & processing
- Advanced features
- User support
- Responsive design

European Patent Office

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Advanced features – Field identifiers



Espacenet
Patent search

ctxt=puls* ctxt=laser*

My Espacenet
Help
Classification search
Results

Home > Results

76311 results found, 133740 publications

List view
List content
Sort by

Text only
▼ All
▼ Ranking
▼

☐ 1. **PULSE LASER WITH PULSE ENERGY TRIMM...**
EP0998773A1 • CYMER INC [US]
Earliest priority: 1997-07-21 • Earliest publication: 19...
No abstract available

☐ 2. **Switching device for operating a pulse laser di...**
EP2040344A2 • OSRAM OPTO SEMICONDUCTOR...
Earliest priority: 2007-09-18 • Earliest publication: 20...
The circuit arrangement has a **pulse laser** diode (1) and a current source (2) for supplying a direct current into the **pulse laser** diode. The current limiting (3) is provided for limiting the

changed

new

Field identifier	Former Espacenet	Description	Examples
nftxt	-	All text fields or names	nftxt="extreme ultraviolet lithography"
nbt	<i>nft</i>	Title, abstract or names	nbt="microscope lens"
ti	<i>ti</i>	Title	ti="mouse trap"
ab	<i>ab</i>	Abstract	ab="mouse trap"
desc	<i>desc</i>	Description	desc="lens"
claims	<i>claims</i>	Claims	claims="laser"
ta	<i>ta</i>	Title or abstract	ta="laser printer"
ctxt	-	Title, abstract or claims	ctxt="magnetic particle imaging"
ftxt	<i>extftxt</i>	All text fields (title, abstract, description or claims)	ftxt="nanoparticles"
in	<i>in</i>	Inventor	in="smith"
pa	<i>pa</i>	Applicant	pa="siemens"
ia	<i>ia</i>	Inventor or applicant	ia="apple OR ia="ries klaus" pd=20180107 or pd="07/01/2018" or pd=07/01/2018
pd	<i>pd</i>	Publication date	
prd	-	Priority date	prd=201602
pr	<i>pr</i>	Priority number	pr="ep20050104792"
pn	<i>pn</i>	Publication number	pn="ep1000000"
ap	<i>ap</i>	Application number	ap="jp19890234567"
num	<i>num</i>	All numbers	num="ep1000000"
ipc	<i>ipc</i>	IPC	ipc="A63B49/08"
cpc	<i>cpc</i>	CPC	cpc="A61K31/13"
cpcc	<i>cpcc</i>	CPC combination sets	cpcc="C08F8/30", cpcc="C08F297/02"
cl	<i>cl</i>	IPC or CPC	cl="C10J3"
ct	<i>ct</i>	Cited document	ct="ep1000000"

European Patent Office

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Advanced features – Advanced search

 **Espacenet**
Patent search

(ctx = "puls*" OR ctx = "impuls*") AND ctx = "laser*" AND ia = "ursula" AND ia = "keller" x

Office/Language ▾

My Espacenet Help Classification search Results **Advanced search** Filters Tooltips Feedback

Home > **Results**

Query language: All ▾

AND ▾ + Field

OR ▾ + Field x

- Title, abstract or claims ▾ ▾ → Group
puls* x
- Title, abstract or claims ▾ ▾ → Group
impuls* x

Title, abstract or claims ▾ ▾ → Group
laser* x

Inventors or applicants ▾ ▾ → Group
ursula x

Inventors or applicants ▾ ▾ → Group
keller x

17 results found, 37 publications

List view	List content	Sort by
Text only ▾	All ▾	Ranking ▾
<input type="checkbox"/> 1. OPTICAL COMPONENT FOR GENERATING PULSE... EP0826164A1 • KELLER WEINGARTEN URSULA [CH] Earliest priority: 1995-05-19 • Earliest publication: 1996-11-21 No abstract available		
<input type="checkbox"/> 2. PULSED LASER US2007223540A1 • TIME BANDWIDTH PRODUCTS AG [...] Earliest priority: 2006-01-27 • Earliest publication: 2007-09-27 The invention concerning a pulsed laser is provided and includes an optical resonator being defined by at least two reflective elements, and the optical resonator defining a laser radiation beam path; the laser		
<input type="checkbox"/> 3. PULSE-GENERATING LASER W00302817A1 • KELLER URSULA [CH] Earliest priority: 2001-09-24 • Earliest publication: 2003-04-03 An optically pumped laser with an Er:Yb: doped solid state gain element (2) is disclosed, which is passively mode... art solid state pulsed lasers, the threshold for Q-switched-mode-locked operation is		

Search Reset

European Patent Office

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Advanced search: Field operators

nftxt any "life boat" ×

Q

Query language: All ▾

AND ▾

+ Field

All text fields or names ▾

Any ▾

→ Group

life boat

Any
All
Proximity
=

Any ↔ OR

ALL ↔ AND

= ↔ “ ”

×

Search

Reset

Advanced search: Field operator proximity

nftxt=("boat" prox/distance<2 "life") ×

Q

Query language: All ▾

AND ▾

+ Field

All text fields or names ▾

Proximity ▾

→ Group

boat

< ▾ 2 ▾

life

words away from

in the same sentence as

in the same paragraph as

×

☐ 1. LIFE BOAT

CA287300A • PEDDLE ROBERT

Earliest publication: 1929-02-19

Advanced search: Field operator proximity

nftxt=("boat" prox/unit=sentence "life")

×

Q

Query language: All

AND+ Field

All text fields or namesProximity→ Group

boat

in the same sentence as

life

Advanced features - Filters

Espacenet

Patent search

ctxt=(puls* or impuls*) ctxt=laser*

×

Q

Office/Language

My EspacenetHelpClassification searchResultsAdvanced searchFiltersTooltipsFeedback

Home> Results

Filters: Countries (publication): DE

FamilyPublication

Countries (publication)

DE

(7927)

ApplyExclude

Languages (publication)

Publication date (publication)

Priority date

IPC main groups

6398 results found, 7927 publications

List viewText only

List contentAll

Sort byRanking

1.Method for spectrally varying a quantum casca...
DE102004026076A1 • INST NIEDERTEMPERATU...
Earliest priority: 2004-05-25 • Earliest publication: 2...
Method for spectrally varying a quantum cascade laser
comprises heating the laser in a controlled manner by
modulating the control impulse, especially a pulse width

2. Optical coder
DE3420600A1 • MITSUBISHI ELECTRIC CORP [JP]
Earliest priority: 1983-06-03 • Earliest publication: 1...
An optical coder is described which has a simplified
construction and improved accuracy. A semiconductor laser
emits a laser beam which is collimated by a collimator lens

3.Method for detecting rapidly occurring process...
DE3914584A1 • JENOPTIK JENA GMBH [DD]
Earliest priority: 1988-07-04 • Earliest publication: 1...

European Patent Office

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Filters – Different category: AND operator

Filters: Countries (publication): DE × IPC details: B23K26/00 × Applicants: FRAUNHOFER GES FORSCHUNG ×

Family ☒ Publication

Countries (publication)		
Languages (publication)		
Publication date (publication)		
Priority date		
IPC main groups		
IPC details		
CPC main groups		
CPC details		
Applicants		
Inventors		

IPC details

☒ B23K26/00

☐ H01S3/10

☐ H01S3/00

☐ B23K26/06

☐ B23K26/08

☐ B23K26/40

☐ B23K26/38

☐ B23K26/36

Apply

Exclude

Applicants

☒ FRAUNHOFER GES FORSCHUNG (58)

☐ ELECTRO SCIENT IND INC (33)

☐ DISCO CORP (26)

☐ DISCO ABRASIVE SYSTEMS LTD (24)

☐ GEN ELECTRIC (21)

☐ MITSUBISHI ELECTRIC CORP (19)

☐ SIEMENS AG (19)

Apply

Exclude

Filters – Same category: AND / OR

- **OR** when applied at the same time

Filters: IPC details: B23K26/00 OR B23K26/06 OR B23K26/38 ×

13006 results found, 32893 publications

- **AND** when applied in consecutive order (here co-assignments)

Filters: IPC details: B23K26/00 × AND B23K26/06 × AND B23K26/38 ×

703 results found, 3031 publications

Filters – Family vs Publication level

Two levels of filters for:

- **Family:**
All search criteria and filters have to be met on family level (e.g. families with no CN family member)
- **Publication:**
All search criteria and filters have to be met by at least one publication of the patent family (e.g. no CN document in result list)

Family ☒ Publication

Countries (family) ▾

Languages (family) ▾

Earliest publication date (family) ▾

Content

- New Espacenet project
- Search
- Data analysis & processing
- Advanced features
- **User support**
- Responsive design

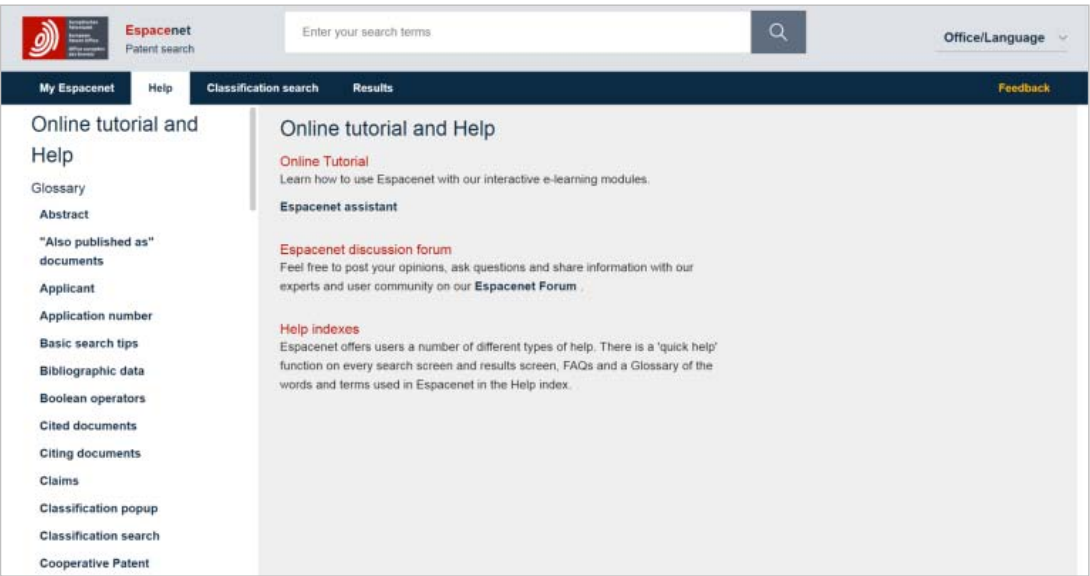
User support – Introductory video



European Patent Office

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User support - Help



European Patent Office

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User support - Tooltips

The screenshot shows the Espacenet search results page for the query "(pulse* or impuls*) laser* H01S3/097". The page displays 2311 results found out of 3709 publications. A tooltip is shown over the 'Register' link, explaining that clicking it opens a new tab displaying the application in the register of the respective patent authority.

Search Results:

- ★ EP0069381A1 **Laser device having laser beam**
- Also published as: Patent Translate
- Bibliographic data

Register

Inventors: HIRAMOTO JUNICHI C O OSAKA WOR, TAKENAKA S
 Applicants: SUMITOMO ELECTRIC INDUSTRIES [JP] → Patent register link

Classification: H01S3/097; H01S3/10; H01S3/102; H01S3/104
 IPC: H01S3/097; H01S3/10; H01S3/102; H01S3/104
 CPC: default: H01S3/10; H01S3/104

Application number: EP82106001A Global Dossier

Priority numbers: JP10531881 19810706

Publication date: 1983-01-12
 Filing date: 1982-07-05
 Priority date: 1981-07-06

European Patent Office

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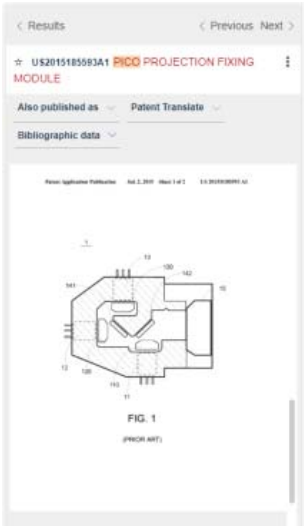
Content

- New Espacenet project
- Search
- Data analysis & processing
- Advanced features
- User support
- **Responsive design**

European Patent Office

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Responsive behaviour of new Espacenet



Why β ?

- Unique opportunity for a last check of functionality and operational robustness
 - in a real production environment
 - with real users
- Last chance to spot errors, collect feedback iron out bugs before released into full production

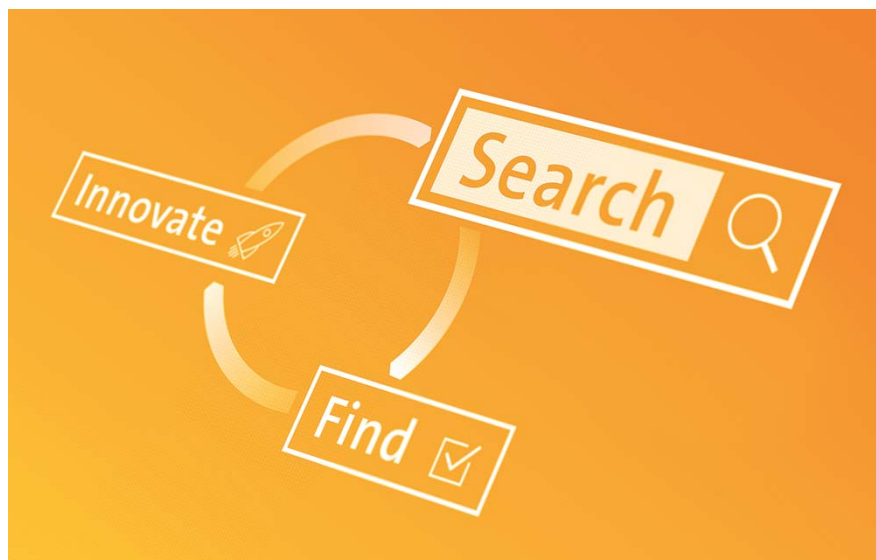


Why β ?

Please keep in mind that new Espacenet is still in β , thus

- there could be deficiencies in the functionality, data handling or coverage, or bugs, errors or other problems.
- You should not take any business-critical decisions based on searches conducted with it.

Test the Espacenet of the future



European Patent Office

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epo.org/espacenet-beta

European Patent Office

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Summary

- The [beta version](#) of new Espacenet [is available](#) for testing
- The workflow changed
 - keep the overview with the result list
 - the various detail views are synchronised
- More options for result list and document view
- Advanced search and filters offer new functionalities
- Usable on many devices

Feedback is welcome



Thank you!

Johannes Schaaf
Roland Feinäugle

Patent Information Marketing
pim@epo.org

European Patent Office



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