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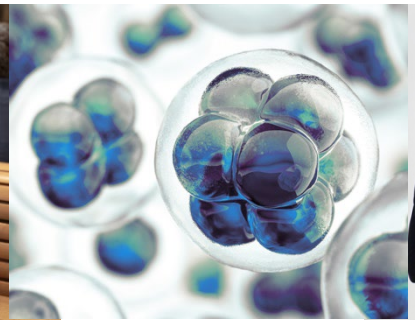
Cited ETSI, IEEE documents & SEP's

PATCOM meeting


Geert Boedt

19-10-2020

Patent document → IEEE citations

Example: H.264 (MPEG 4 codec)

(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 391 131 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
13.03.2013 Bulletin 2013/11

(51) Int Cl.:
H04N 7/26 *(2006.01)* ***H04N 7/50*** *(2006.01)*

(43) Date of publication A2:
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(21) Application number: **11167376.0**

(22) Date of filing: **24.05.2011**

(84) 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
Designated Extension States:
BA ME

(30) Priority: **27.05.2010 US 788394**

(71) Applicant: **Freescale Semiconductor, Inc.**
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(72) Inventors:
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69121, Tel Aviv (IL)
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42910 Avihail (IL)

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Grove House
Lutyens Close
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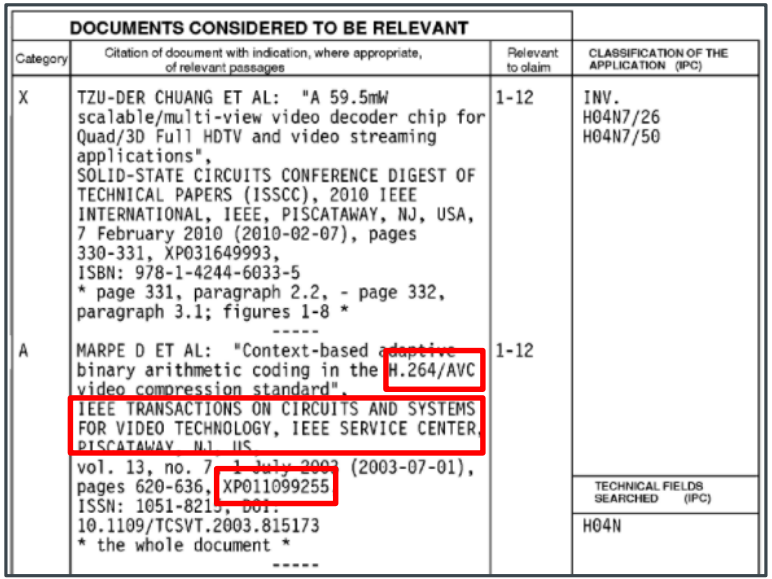
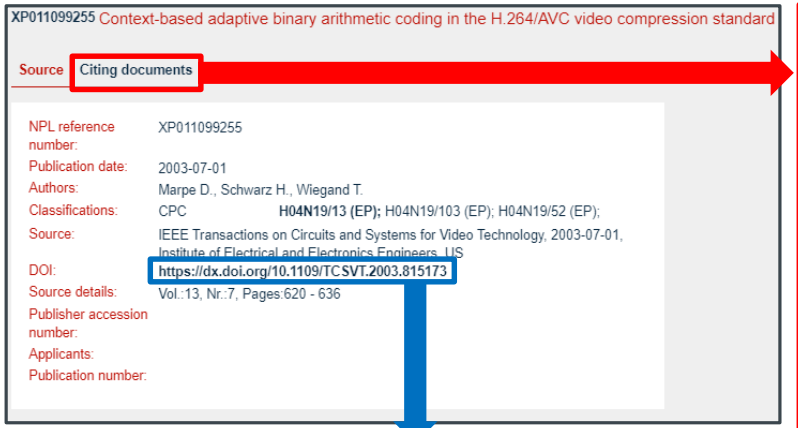
Basingstoke, Hampshire RG24 8AG (GB)

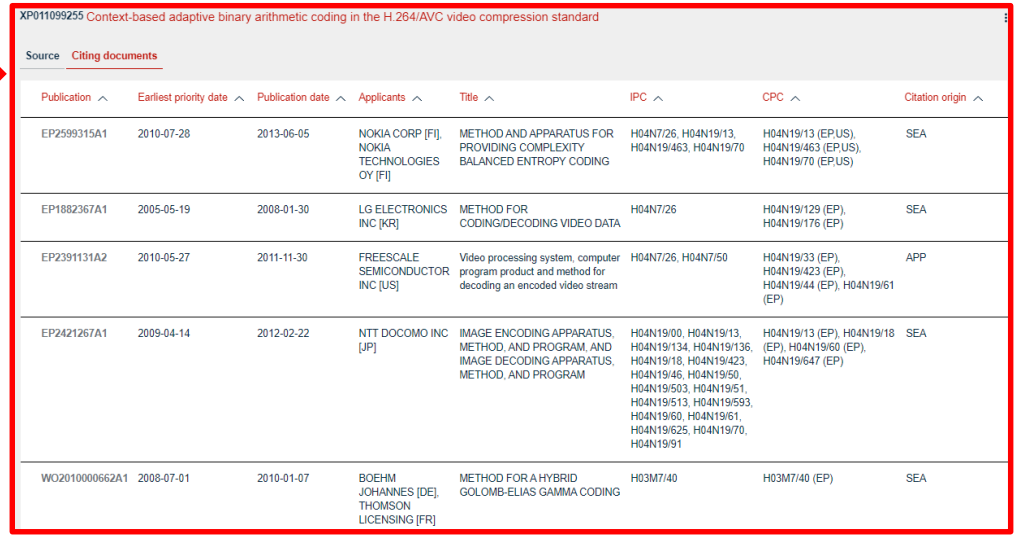
(54) **Video processing system, computer program product and method for decoding an encoded video stream**



DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	TZU-DER CHUANG ET AL: "A 59.5mW scalable/multi-view video decoder chip for Quad/3D Full HDTV and video streaming applications", SOLID-STATE CIRCUITS CONFERENCE DIGEST OF TECHNICAL PAPERS (ISSCC), 2010 IEEE INTERNATIONAL, IEEE, PISCATAWAY, NJ, USA, 7 February 2010 (2010-02-07), pages 330-331, XP031649993, ISBN: 978-1-4244-6033-5 * page 331, paragraph 2.2, - page 332, paragraph 3.1; figures 1-8 *	1-12	INV. H04N7/26 H04N7/50
A	MARPE D ET AL: "Context-based adaptive binary arithmetic coding in the H.264/AVC video compression standard", IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 13, no. 7, 1 July 2003 (2003-07-01), pages 620-636, XP011099255 ISSN: 1051-8215, DOI: 10.1109/TCSVT.2003.815173 * the whole document *	1-12	TECHNICAL FIELDS SEARCHED (IPC) H04N

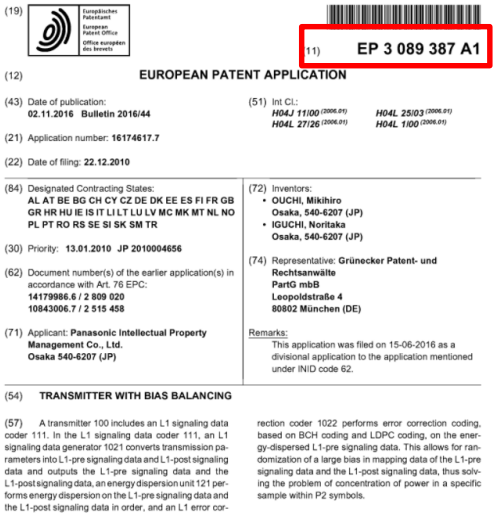

XP011099255 Context-based adaptive binary arithmetic coding in the H.264/AVC video compression standard
Source
Citing documents
NPL reference number: XP011099255
Publication date: 2003-07-01
Authors: Marpe D., Schwarz H., Wiegand T.
Classifications: CPC H04N19/13 (EP); H04N19/103 (EP); H04N19/52 (EP);
Source: IEEE Transactions on Circuits and Systems for Video Technology, 2003-07-01, Institute of Electrical and Electronics Engineers, US
DOI: https://dx.doi.org/10.1109/TCSVT.2003.815173
Source details: Vol.:13, Nr.:7, Pages:620 - 636
Publisher accession number:
Applicants:
Publication number:


XP011099255 Context-based adaptive binary arithmetic coding in the H.264/AVC video compression standard
Source
Citing documents
Publication
Earliest priority date
Publication date
Applicants
Title
IPC
CPC
Citation origin
EP2599315A1 2010-07-28 2013-06-05 NOKIA CORP [FI], NOKIA TECHNOLOGIES OY [FI] METHOD AND APPARATUS FOR PROVIDING COMPLEXITY BALANCED ENTROPY CODING H04N7/26, H04N19/13, H04N19/463, H04N19/70 H04N19/13 (EP,US), H04N19/463 (EP,US), H04N19/70 (EP,US) SEA
EP1882367A1 2005-05-19 2008-01-30 LG ELECTRONICS INC [KR] METHOD FOR CODING/DECODING VIDEO DATA H04N7/26 H04N19/129 (EP), H04N19/176 (EP) SEA
EP2391131A2 2010-05-27 2011-11-30 FREESCALE SEMICONDUCTOR INC [US] Video processing system, computer program product and method for decoding an encoded video stream H04N7/26, H04N7/50 H04N19/33 (EP), H04N19/423 (EP), H04N19/44 (EP), H04N19/61 (EP) APP
EP2421267A1 2009-04-14 2012-02-22 NTT DOCOMO INC [JP] IMAGE ENCODING APPARATUS, METHOD, AND PROGRAM, AND IMAGE DECODING APPARATUS, METHOD, AND PROGRAM H04N19/00, H04N19/13, H04N19/134, H04N19/136, H04N19/18, H04N19/423, H04N19/46, H04N19/50, H04N19/503, H04N19/51, H04N19/513, H04N19/593, H04N19/60, H04N19/61, H04N19/625, H04N19/70, H04N19/91 H04N19/13 (EP), H04N19/18 (EP), H04N19/60 (EP), H04N19/647 (EP) SEA
WO2010000662A1 2008-07-01 2010-01-07 BOEHM JOHANNES [DE], THOMSON LICENSING [FR] METHOD FOR A HYBRID GOLOMB-ELIAS GAMMA CODING H03M7/40 H03M7/40 (EP) SEA


Context-based adaptive binary arithmetic coding in the H.264/AVC video compression standard
Publisher: IEEE
Cite This
PDF
D. Marpe ; H. Schwarz ; T. Wiegand All Authors
726 Paper Citations
549 Patent Citations
6238 Full Text Views
Abstract
Document Sections
I. Introduction
II. The CABAC Framework
III. Detailed Description of CABAC
IV. Experimental Results
V. Conclusion
Authors
Figures
References
Abstract:
Context-based adaptive binary arithmetic coding (CABAC) as a normative part of the new ITU-T/ISO/IEC standard H.264/AVC for video compression is presented. By combining an adaptive binary arithmetic coding technique with context modeling, a high degree of adaptation and redundancy reduction is achieved. The CABAC framework also includes a novel low-complexity method for binary arithmetic coding and probability estimation that is well suited for efficient hardware and software implementations. CABAC significantly outperforms the baseline entropy coding method of H.264/AVC for the typical area of envisaged target applications. For a set of test sequences representing typical material used in broadcast applications and for a range of acceptable video quality of about 30 to 38 dB, average bit-rate savings of 9%-14% are achieved.
Published in: IEEE Transactions on Circuits and Systems for Video Technology (Volume: 13 , Issue: 7 , July 2003)
Page(s): 620 - 636
Date of Publication: 04 August 2003
ISSN Information:
INSPEC Accession Number: 7715566
DOI: 10.1109/TCSVT.2003.815173
Publisher: IEEE

Patent document → ETSI citations

Example: DVB-T2



(19) Europäisches Patentamt / European Patent Office / Office européen des brevets

(11) EP 3 089 387 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
02.11.2016 Bulletin 2016/44

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H04J 11/00 *(2006.01)* ***H04L 25/03*** *(2006.01)*
H04L 27/26 *(2006.01)* ***H04L 1/00*** *(2006.01)*

(21) Application number: **16174617.7**

(22) Date of filing: **22.12.2010**

(84) 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

(30) Priority: **13.01.2010 JP 2010004656**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
14179986.6 / 2 809 020
10843006.7 / 2 515 458

(71) Applicant: **Panasonic Intellectual Property Management Co., Ltd.**
Osaka 540-6207 (JP)

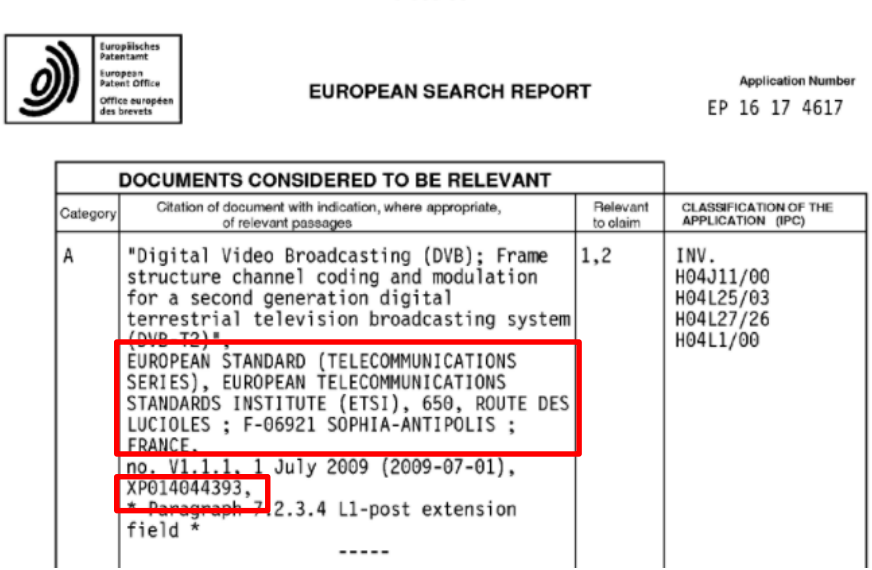
(72) Inventors:
- **OUCHI, Mikihiro**
  Osaka, 540-6207 (JP)
- **IGUCHI, Noritaka**
  Osaka, 540-6207 (JP)

(74) Representative: **Grünecker Patent- und Rechtsanwälte**
PartG mbB
Leopoldstraße 4
80802 München (DE)

Remarks:
This application was filed on 15-06-2016 as a divisional application to the application mentioned under INID code 62.

(54) **TRANSMITTER WITH BIAS BALANCING**

(57) A transmitter 100 includes an L1 signaling data coder 111. In the L1 signaling data coder 111, an L1 signaling data generator 1021 converts transmission parameters into L1-pre signaling data and L1-post signaling data and outputs the L1-pre signaling data and the L1-post signaling data, an energy dispersion unit 121 performs energy dispersion on the L1-pre signaling data and the L1-post signaling data in order, and an L1 error correction coder 1022 performs error correction coding, based on BCH coding and LDPC coding, on the energy-dispersed L1-pre signaling data. This allows for randomization of a large bias in mapping data of the L1-pre signaling data and the L1-post signaling data, thus solving the problem of concentration of power in a specific sample within P2 symbols.



EP 3 089 387 A1

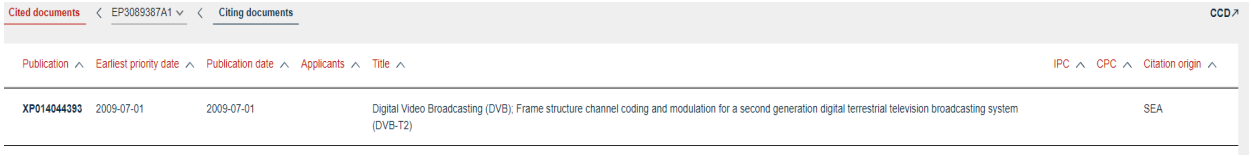
Europäisches Patentamt / European Patent Office / Office européen des brevets

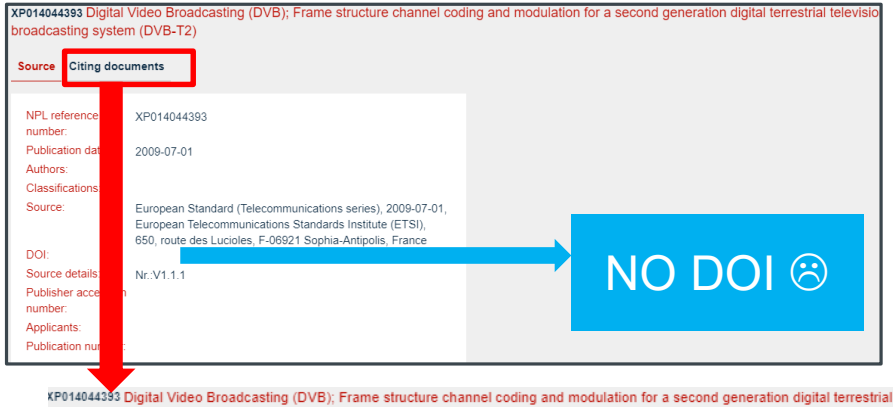
EUROPEAN SEARCH REPORT

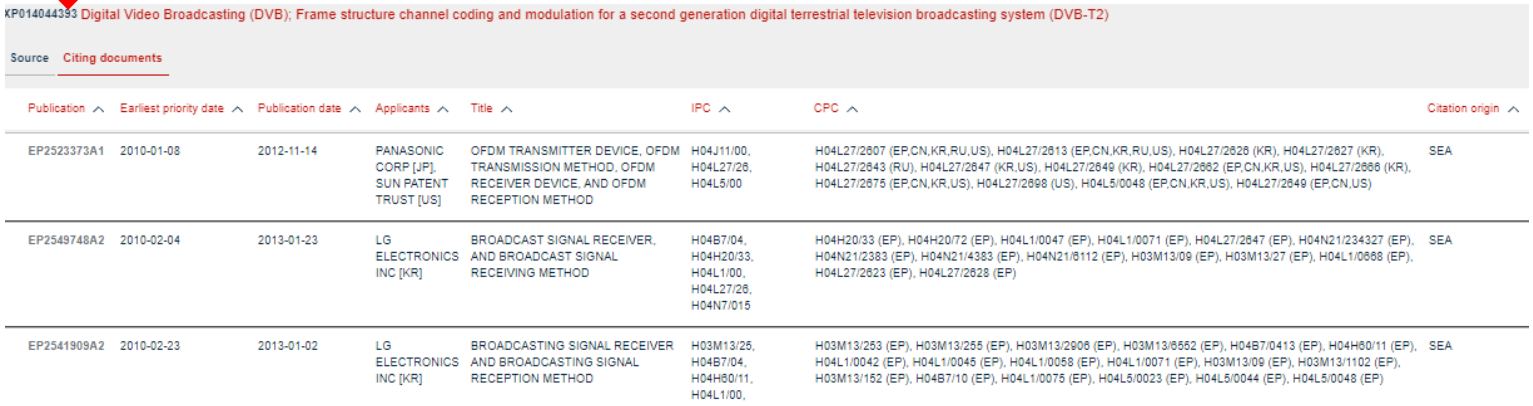
Application Number
EP 16 17 4617

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	"Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)", EUROPEAN STANDARD (TELECOMMUNICATIONS SERIES), EUROPEAN TELECOMMUNICATIONS STANDARDS INSTITUTE (ETSI), 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS ; FRANCE, no. V1.1.1, 1 July 2009 (2009-07-01), XP014044393, * Paragraph 7.2.3.4 L1-post extension field * -----	1,2	INV. H04J11/00 H04L25/03 H04L27/26 H04L1/00


Cited documents
EP3089387A1
Citing documents
CCD
Publication
Earliest priority date
Publication date
Applicants
Title
IPC
CPC
Citation origin
XP014044393
2009-07-01
2009-07-01
Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)
SEA


XP014044393 Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial televisio
broadcasting system (DVB-T2)
Source
Citing documents
NPL reference number:
XP014044393
Publication dat
2009-07-01
Authors:
Classifications
Source:
European Standard (Telecommunications series), 2009-07-01, European Telecommunications Standards Institute (ETSI), 650, route des Lucioles, F-06921 Sophia-Antipolis, France
DOI:
Source details
Nr.:V1.1.1
Publisher acce n number:
Applicants:
Publication nu
NO DOI ☹


XP014044393 Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)
Source
Citing documents
Publication
Earliest priority date
Publication date
Applicants
Title
IPC
CPC
Citation origin
EP2523373A1
2010-01-08
2012-11-14
PANASONIC CORP [JP], SUN PATENT TRUST [US]
OFDM TRANSMITTER DEVICE, OFDM TRANSMISSION METHOD, OFDM RECEIVER DEVICE, AND OFDM RECEPTION METHOD
H04J11/00, H04L27/26, H04L5/00
H04L27/2607 (EP,CN,KR,RU,US), H04L27/2613 (EP,CN,KR,RU,US), H04L27/2626 (KR), H04L27/2627 (KR), H04L27/2643 (RU), H04L27/2647 (KR,US), H04L27/2649 (KR), H04L27/2662 (EP,CN,KR,US), H04L27/2666 (KR), H04L27/2675 (EP,CN,KR,US), H04L27/2698 (US), H04L5/0048 (EP,CN,KR,US), H04L27/2649 (EP,CN,US)
SEA
EP2549748A2
2010-02-04
2013-01-23
LG ELECTRONICS INC [KR]
BROADCAST SIGNAL RECEIVER, AND BROADCAST SIGNAL RECEIVING METHOD
H04B7/04, H04H20/33, H04L1/00, H04L27/26, H04N7/015
H04H20/33 (EP), H04H20/72 (EP), H04L1/0047 (EP), H04L1/0071 (EP), H04L27/2647 (EP), H04N21/234327 (EP), H04N21/2383 (EP), H04N21/4383 (EP), H04N21/6112 (EP), H03M13/09 (EP), H03M13/27 (EP), H04L1/0668 (EP), H04L27/2623 (EP), H04L27/2628 (EP)
SEA
EP2541909A2
2010-02-23
2013-01-02
LG ELECTRONICS INC [KR]
BROADCASTING SIGNAL RECEIVER AND BROADCASTING SIGNAL RECEPTION METHOD
H03M13/25, H04B7/04, H04H60/11, H04L1/00,
H03M13/253 (EP), H03M13/255 (EP), H03M13/2906 (EP), H03M13/6552 (EP), H04B7/0413 (EP), H04H60/11 (EP), H04L1/0042 (EP), H04L1/0045 (EP), H04L1/0058 (EP), H04L1/0071 (EP), H03M13/09 (EP), H03M13/1102 (EP), H03M13/152 (EP), H04B7/10 (EP), H04L1/0075 (EP), H04L5/0023 (EP), H04L5/0044 (EP), H04L5/0048 (EP)
SEA

Search for cited NPL (ETSI & IEEE & …) ?

- Not possible in ESPACENET
  - User starts from “citing document”
  - User starts from an XP number
- Only option: full text search in NPL biblio from DocDB → PATSTAT
  - Not perfect !
- Example: search for NPL that have “IEEE” and “DVB” in biblio

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SELECT npl_publn_id,npl_type,npl_biblio,npl_publn_date
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FROM tls214_npl_publn
where npl_biblio like '% ieee %' and npl_biblio like '%DVB%'
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Results from PATSTAT

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11283329	s	…'Key technologies for next-generation terrestrial digital television standard **DVB-T2**', **IEEE** COMMUN. MAGAZINE, vol. 47, no. 10, October 2009 (2009-10-01), pages 146 - 153, XP011283329, DOI: doi:10.1109/MCOM.2009.5273822	20091000	doi:10.1109/MCOM.2009.5273822			62
10341250	s	'A novel, high-speed, reconfigurable demapper-symbol deinterleaver architecture for **DVB-T**', PROCEEDINGS OF THE 1999 **IEEE** INTERNATIONAL SYMPOSIUM ON CIRCUITS AND SYSTEMS / ISCAS '99, MAY 30 - JUNE 2, 1999, ORLANDO, FLORIDA., IEEE SERVICE CENTER, PISCATAWAY, NJ, vol. 4, 30 May 1999 (1999-05-30) - 2 June 1999 (1999-06-02), Piscataway, NJ, pages 382 - 385, XP010341250, ISBN: 978-0-7803-5471-5, DOI: 10.1109/ISCAS.1999.780022	19990530	10.1109/ISCAS.1999.780022	978-0-7803-5471-5		57
11241032	s	An 11 mn2, 70 mW Fully Programmable Baseband Processor for Mobile WiMAX and **DVB-T**/H in 0.12 mum CMOS'; IEEE Journal of Solid-state Circuits, **IEEE** Service Center, Piscataway, NJ, USA, vol. 44, No. 1, Jan. 1, 2009, pp. 90-97, XP011241032, ISSN: 0018-9200; DOI: 10.1109/JSSC.2008.2007167; cited in the application; whole document.	20090101	10.1109/JSSC.2008.2007167		0018-9200	11
31480164	s	**DVB-C2** - The standard for next generation digital cable transmission', BROADBAND MULTIMEDIA SYSTEMS AND BROADCASTING, 2009. BMSB '09. **IEEE** INTERNATIONAL SYMPOSIUM ON…	20090513		978-1-4244-2590-7		10
32188380	s	'Enhanced spatial multiplexing for rate-2 MIMO of **DVB-NGH** system', 2012 19TH **IEEE** INTERNATIONAL CONFERENCE ON TELECOMMUNICATIONS (ICT), 23 April 2012 (2012-04-23)…	20120423	10.1109/ICTEL.2012.6221323	978-1-4673-0745-1		10

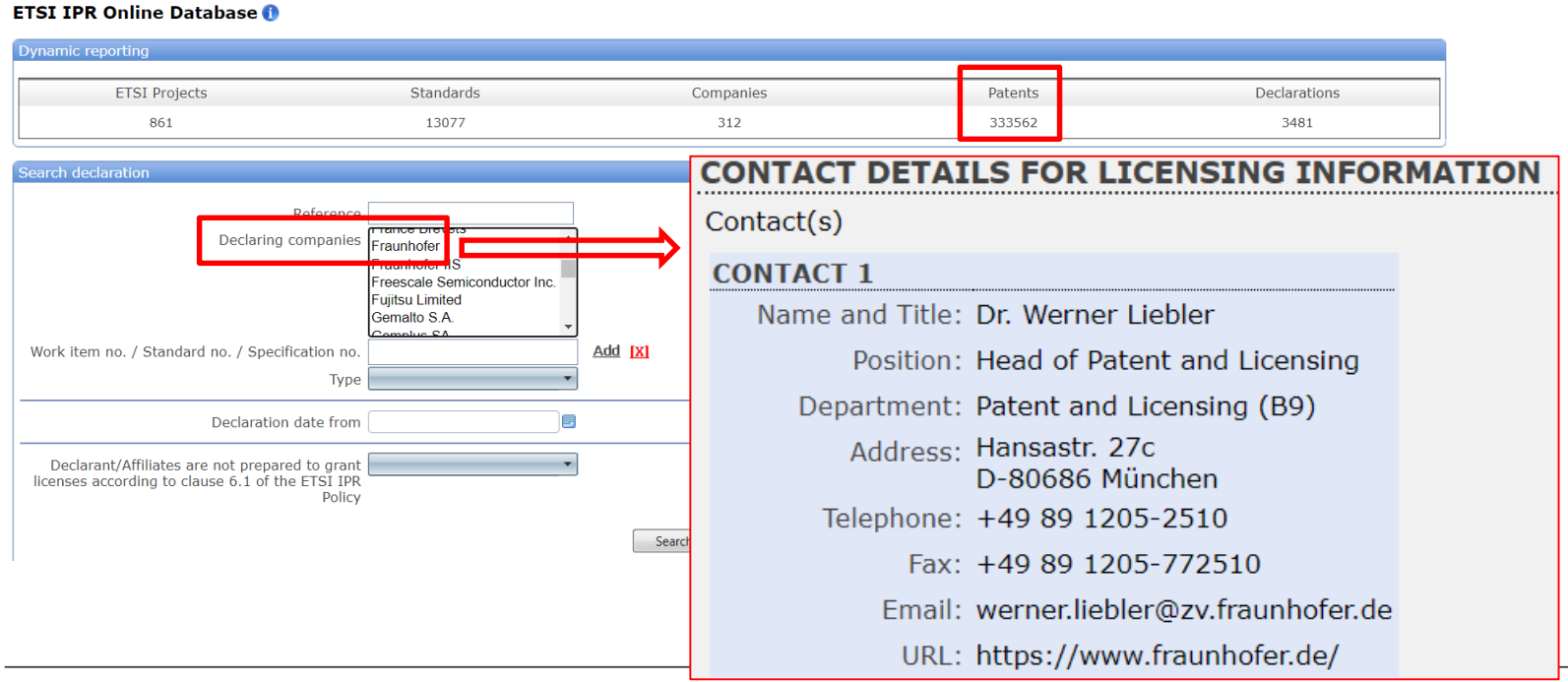
S: Serial

DOI links

ISBN links

ISSN links

SEP data bases
→ based on self-declaration
Example : ETSI IPR Online Database



Work Item or Standard

Work Item / Standard no.	Title	Version/Edition	Illustrative specific part of the Standard (e.g Section)
TS 37.213	Physical layer procedures for shared spectrum channel access		
TS 38.211			
TS 38.212			
TS 38.213			
TS 38.214			
TS 38.321	NR; Medium Access Control (MAC) protocol specification		
TS 38.331	NR; Radio Resource Control (RRC); Protocol specification		

URL- Links to ESPACENET

Patent Family

External ID :

Application Number	Publication Number	Title	Proprietors	Country of Registration
Basis Patent				
WO2018EP61372	**WO2018206398 A1**	**RECEIVER, TRANSMITTER, COMMUNICATION NETWORK, DATA SIGNAL AND METHOD IMPROVING A RETRANSMISSION PROCESS IN A COMMUNICATION NETWORK**	**FRAUNHOFER GES FORSCHUNG**	**WO Patent Cooperation Treaty**
Other Members				
CN20188045815	CN110945813 A	Receiver, transmitter, communication network, data signal and method improving a retransmission process in a communication network	FRAUNHOFER GES FORSCHUNG	CN CHINA
EP20180719945	EP3622648 A1	RECEIVER, TRANSMITTER, COMMUNICATION NETWORK, DATA SIGNAL AND METHOD IMPROVING A RETRANSMISSION PROCESS IN A COMMUNICATION	FRAUNHOFER GES FORSCHUNG	EP European Patent Office

SEP data bases by Academic researchers → based on data obtained from 13 major SSOs (2016)

- **Rudi Bekkers**, Eindhoven University of Technology, and Dialogic, Utrecht, Netherlands
- **Christian Catalini**, Massachusetts Institute of Technology, MIT Sloan School of Management
- **Arianna Martinelli**, Scuola Superiore Sant'Anna, Pisa, Italy
- **Timothy Simcoe**, Boston University and NBER
- **Cesare Righi**, Boston University

46.906 disclosed patents
969 different firms
14.057 USPTO or EPO patents or patent applications **identified in PATSTAT via unique application identification**

at the end of the day

- Examiners do cite standardisation documents …
  via NPL (backward)
- Forward citations are possible (what patents cite which document)
- SEP data via SSO's or academic data bases and tools

Thank you for your attention!

Geert Boedt: Patent Information Specialist
gboedt@epo.org