

CPC

Cooperative Patent Classification

Annual Report 2016



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Introductory words by the EPO President Benoît Battistelli

2016 was another successful year for the Cooperative Patent Classification (CPC).

The geographical extent of the CPC grew further and now counts 25 patent offices which classify or intend to classify their national collections in the CPC thereby further promoting technical harmonisation. This is extremely positive for the CPC system as it indicates that patent offices not only want to benefit from the CPC as users but are also willing to contribute to the system by classifying their own publications in this refined scheme.

The more documents which are finely classified, the easier it is for all, including patent examiners around the world, to retrieve these when searching for prior art. This upfront investment which consists in translating technical information irrespective of the publication language into CPC classification symbols will later payback in terms of efficiency of the patent granting procedure while at the same time also benefiting its quality.

As creators of the CPC, the EPO and the USPTO have the responsibility to maintain the CPC system so that it responds to the diverse needs of its users. Regular CPC events with the user community not only promote transparency but also allow us to develop the CPC according to the needs of not only examiners but also of the user community as a whole. An example here is our response to users to have less frequent but more comprehensive scheme revisions. Working together with other patent offices and the user community as a whole, we will assure that the CPC remains fit for the future and that it continues to serve its main purposes, namely to promote quality and efficiency of the global patent system. This is a continuous process fully integrated in our operations as a patent office.

We remain committed to the highest quality standard to be applied in the Cooperative Patent Classification for the benefit of all.



Benoît Battistelli
President, European Patent Office

Introductory Words by Joseph Matal, Performing the Functions and Duties of the Under Secretary of Commerce for Intel- lectual Property and Director of the United States Patent and Trademark Office

This year has proven to be a very busy year for the United States Patent and Trademark Office (USPTO) and our partner in the Cooperative Patent Classification (CPC) system, the European Patent Office (EPO). Our offices have continued our efforts to keep the CPC current in the face of new filing trends and emerging technologies by refining the existing CPC schemes and definitions.

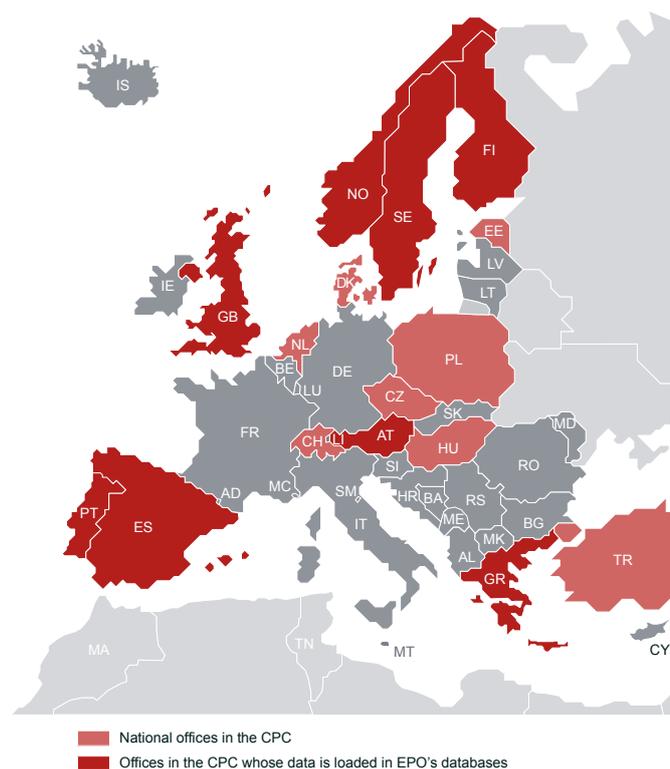
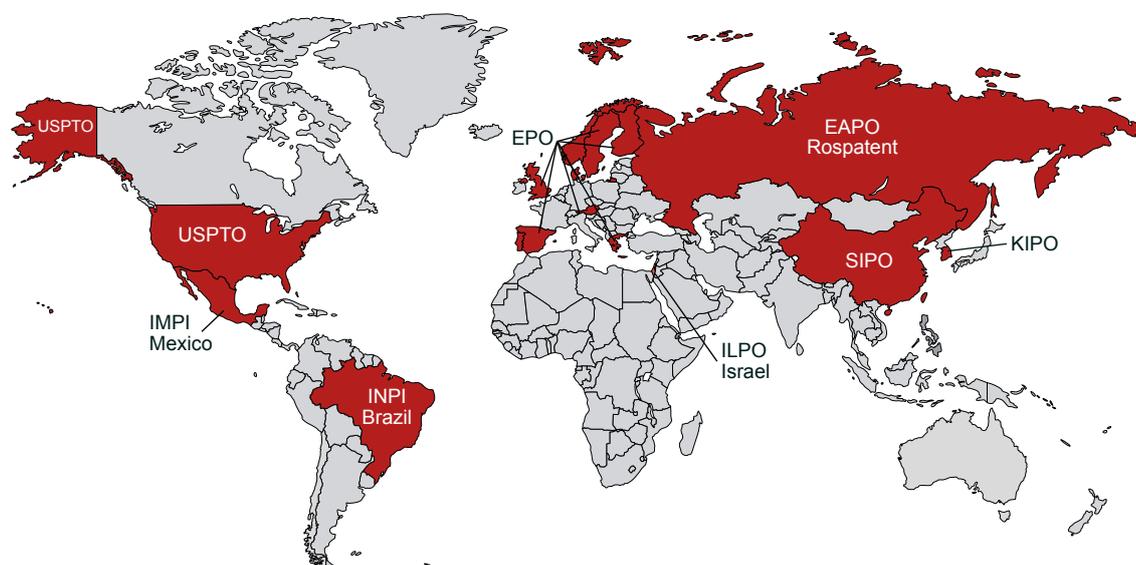
In 2016, the USPTO and EPO jointly published 36 revision projects, as well as 13 reclassification projects. The revision process of refining subject matter areas reflects the needs of examiners in response to technological growth. These revisions resulted in reclassification of 55,319 documents into CPC. As a result of these projects, 1,368 new CPC symbols were created and 1,307 symbols were deleted. There were five (5) publications relating to scheme and definition changes, which resulted in the creation of 351 definitions, and the modification of 3,965 definitions.

Our offices also continued our efforts to expand the CPC's reach to new countries across the globe. In 2016, the USPTO held numerous training and bilateral events to introduce the CPC to other intellectual property offices. These included bilateral training with the Korean Intellectual Property Office (KIPO) and the Israel Patent Office (ILPO). Together with the EPO, we also organized the CPC Annual Meeting with National Offices, as well as meetings with Industry Users. As the CPC system has grown, it has become very attractive to intellectual property offices throughout the world, and the USPTO expects the CPC's reach to continue to expand in the coming years.

Because CPC is continuously updated to reflect cutting edge technologies, and interest in adopting the CPC system is continually increasing around the globe, the value of CPC is clear at a high level. In practical applications, the harmonization of existing classification systems and migration to a common classification scheme enables examiners to find the best art and identify novelty rapidly. Quality and efficiency of examination is improved benefitting all stakeholders.

As with the first and second editions of the "CPC Annual Report", this third edition provides current statistics on a variety of CPC-related topics, including CPC classification coverage and CPC document coverage.

2016 Statistics CPC Coverage



CPC is used by more than 45 Patent Offices via EPO's EPOQUE Net system, and by more than 25,000 examiners worldwide.

CPC is the classification system used by the USPTO and EPO as of 1 January 2013. CPC covers the patent documentation as presented in the table below in the column entitled "Systematically classified". This table refers to dates from which priorities of documents were systematically recorded and documents systematically circulated to the EPO

classifiers for intellectual classification into ECLA until 2013, then jointly classifying new documents into CPC from January 2013 onwards. (Note that the historic collection of WO documents in non EPO languages were classified into CPC prior to 2016, based on their title, abstracts and figures). Since January 2016, the EPO only intellectually classifies WO documents in its three official languages (DE, EN, and FR) and Dutch, i.e. during the search of the corresponding EP application.

CPC Documentation Coverage – Updated 2 January 2017

This table shows a breakdown of the documents classified in CPC on 1 February 2017. On 29 June 2017, over 47.9 million documents (including 46.4 patent documents and 1.5 million non-patent literature) were classified in CPC. Around 98 % of all US, EP, WIPO documents are classified in CPC.

EPO and USPTO documents are classified at the family level.

Documents that are part of a CPC family are searchable by US and EPO examiners.

Country	Country Code	Number of documents (source: EPODOC on 01/02/2017)	Number of publications classified in CPC (family or document level)	% publications classified in CPC (family or document level)
EPO	EP	3.115.428	3.113.030	99,9%
United States	US	12.001.112	11.650.065	97,1%
Austria	AT	1.003.656	649.104	64,7%
Belgium	BE	585.582	551.554	94,2%
Switzerland	CH	715.369	576.238	80,6%
Germany	DE	5.544.142	4.740.975	85,5%
France	FR	2.415.748	2.395.208	99,1%
United Kingdom	GB	2.374.136	2.118.079	89,2%
Luxembourg	LU	61.825	60.773	98,3%
The Netherlands	NL	544.678	532.843	97,8%
ARIPO	AP	3.910	3.718	95,1%
Australia	AU	1.510.265	1.360.654	90,1%
Canada	CA	2.361.563	1.269.831	53,8%
OAPI	OA	13.432	13.191	98,2%
WIPO (PCT)	WO	2.994.234	2.998.490	100,1%

*Currently, 97% of all US documents are classified in CPC.

CPC Documentation Coverage – Updated 2 January 2017

Additional countries are classifying documents in CPC at the document level. These allocations are made available in separate CPCNO fields in various products such as Epoque (Net), Espacenet (www.worldwide.espacenet.com) or the DocDB XML exchange.

The tables below show the listing of IPO countries with their percentage of publications classified in CPC as of 1 February 2017.

Country	Country Code	Number of documents (source: EPODOC on 01/02/2017)	Number of publications classified in CPC (family or document level)	% publications classified in CPC (family or document level)
Portugal	PT	110.967	100.790	90,8%
Spain	ES	1.089.296	629.519	57,8%
Norway	NO	200.974	171.479	85,3%
Sweden	SE	519.265	330.853	63,7%
Finland	FI	194.071	112.202	57,8%
Poland	PL	273.302	86.310	31,6%
Hungary	HU	117.983	73.100	62,0%
Czech Republic	CZ	90.041	42.734	47,5%
Turkey	TR	62.045	28.661	46,2%
Greece	GR	99.533	52.753	53,0%
Hungary	HU	117.983	73.100	62,0%
Estonia	EE	6.958	5.278	75,9%
Korea	KR	3.245.572	1.420.956	43,8%
China	CN	12.159.983	2.406.586	19,8%
Russian Fed.	RU/SU	2.183.555	306.103	14,0%
Brazil	BR	605.674	380.715	62,9%
Mexico	MX	263.843	239.169	90,6%
Israel	IL	98.571	84.600	85,8%

National Office (NO) Coverage – Updated 1 February 2017

Country	Country Code	Number of publications with CPCNO symbols (document level)
Austria	AT	6.492
Brazil	BR	8.062
China	CN	358.925
Finland	FI	4.575
United Kingdom	GB	127.252
Greece	GR	5.304
Korea	KR	530.676
Mexico	MX	1.516
Russian Fed.	RU/SU	5.748
Spain	ES	31.460
Sweden	SE	139.832

CPC Scheme and Definitions changes

USPTO and EPO Examiners collaborate jointly to maintain the CPC scheme and definitions. All changes are agreed to by both the EPO and USPTO resulting in the same understanding of the new schemes in both offices. Revisions are made by both Offices on a regular basis allowing for a rapid response to filing trends and emerging technologies. Bilateral

scheme changes and developments are agreed to between USPTO and EPO counterparts via collaboration tools and by exchanging comments leading to a common position. Last year we managed to improve the quality of the CPC scheme and definitions by revising diverse segments of the CPC scheme and definitions covering various technical fields.

Scheme Related:

- Number of created new symbols
- Number of deleted symbols

version	Total Symbols	Symbols Deleted	Symbols Added
2016-11	260228	151	139
2016-08	260240	402	393
2016-05	260249	99	123
2016-02	260225	559	610
2016-01	260174	96	103

Definitions related:

- Number of published definitions
- Number of deleted definitions
- Number of modified definitions

version	Total Definitions	Definitions Deleted	Definitions Added	Definitions Modified
2016-11	42837	12	63	1853
2016-08	42786	17	65	1473
2016-05	42738	70	76	191
2016-02	42732	127	109	316
2016-01	42750	34	38	316

In 2016, the USPTO and EPO jointly published 175 CPC change projects relating to scheme and definition changes, which resulted in reclassification of 87,379 families into CPC. There

were five (5) publications relating to scheme and definition changes. As a result of these projects, 1,368 new symbols were created.

2016 CPC Reclassification

Reclassification work was completed for 25 revision projects, which resulted in 87379 families reclassified in CPC.

Projects	Number of Families
RP0001	2420
RP0030	1615
RP0092	680
RP0136	111
RP0137	569
RP0148	438
RP0155	1376
RP0172	1453
RP0200	1904
RP0209	1528
RP0294	2013
RP0295	1546
RP0296	3346
RP0297	9041
RP0298	9292
RP0299	0
RP0300	242
RP0301	28
RP0302	199
RP0304	920
RP0305	1033
RP0307	212
RP0309	885
RP0311	696
RP0312	7832
RP0313	38000
Total = 52 Projects	87379

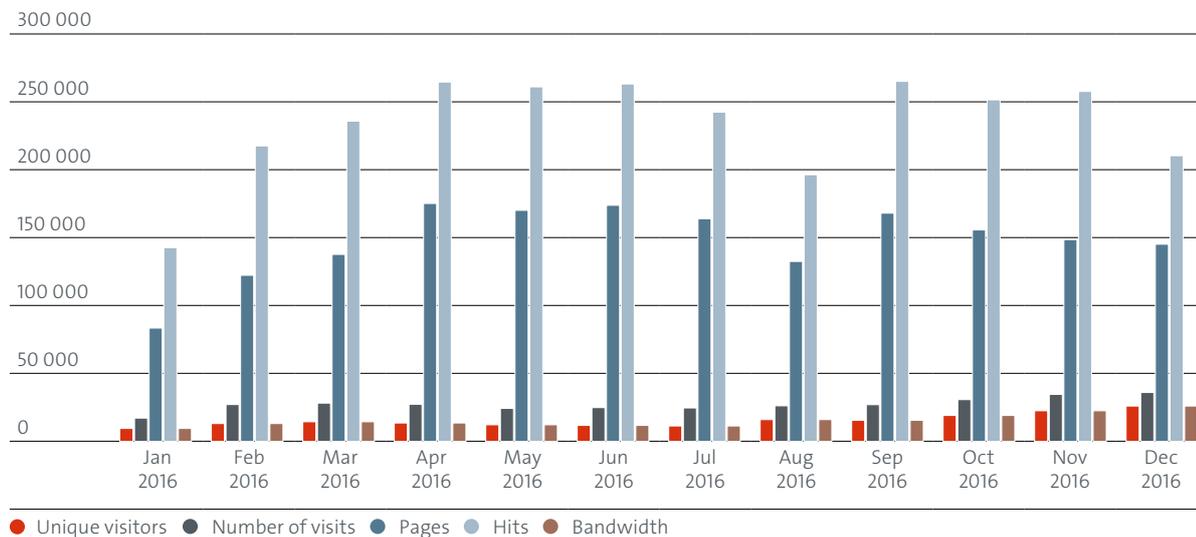
2016 CPC Notices of Changes Publications

2016 NOC Publication	RP	DP	MP	RP-F	Totals
January	8	0	4	0	12
February	7	0	3	0	10
May	11	14	22	2	49
August	6	22	16	0	44
November	20	16	23	1	60
Total	52	52	68	3	175

CPC Website Usage Statistics

The joint CPC Website (www.cpcinfo.org) launched on 25 October 2011. It is the official website of the CPC. Its content is jointly managed by the EPO and the USPTO. On the occasion of the present annual report, the EPO and the USPTO would like to present you some key statistical information about the site.

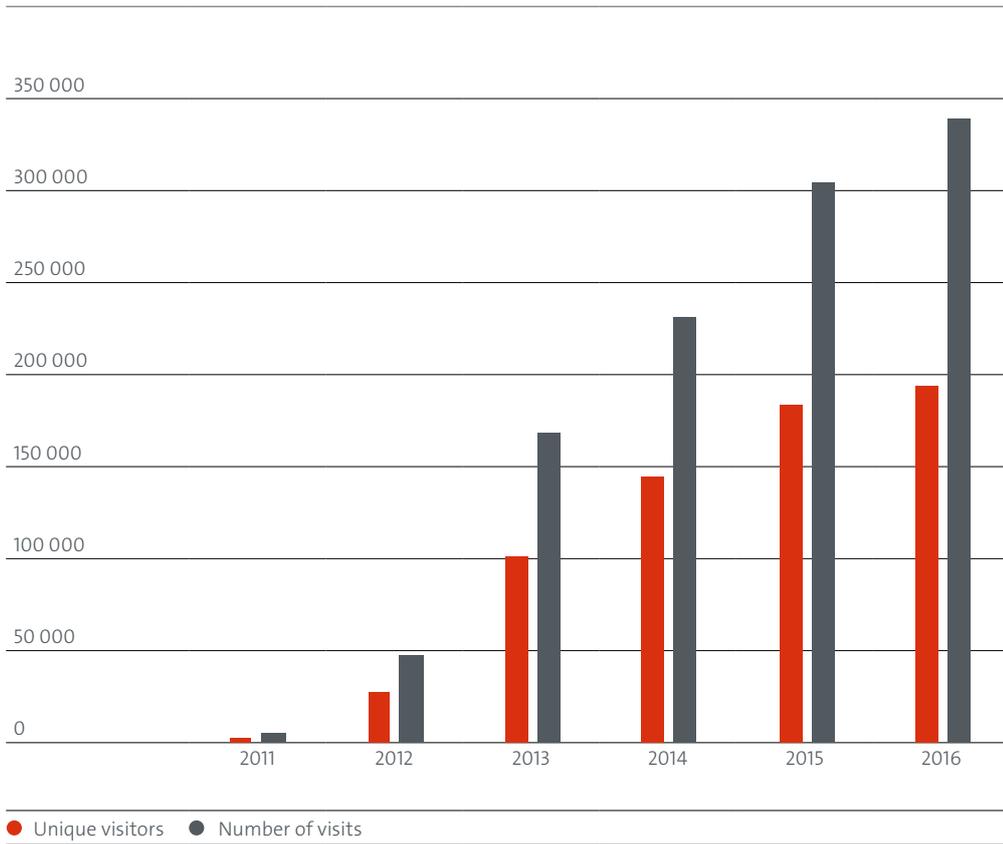
Month	Unique visitors	Number of visits	Pages	Hits	Bandwith (GB)
Jan.16	9753	17282	82510	140819	26,10
Feb.16	13300	27072	120782	214582	41,81
Mar.16	14602	28131	135936	232499	43,60
Apr.16	13725	27308	172835	260859	37,73
May.16	12417	24274	167850	257381	36,94
Jun.16	11949	24857	171510	259470	35,05
Jul.16	11562	24619	161787	239024	31,62
Aug.16	16170	26169	130836	193684	33,97
Sep.16	15680	26982	165800	261325	39,22
Oct.16	19162	30643	153640	247963	41,77
Nov.16	22576	34456	146606	254027	44,21
Dec.16	26002	35814	143289	207467	23,84
Total	186898	327607	1753381	2769100	435,86



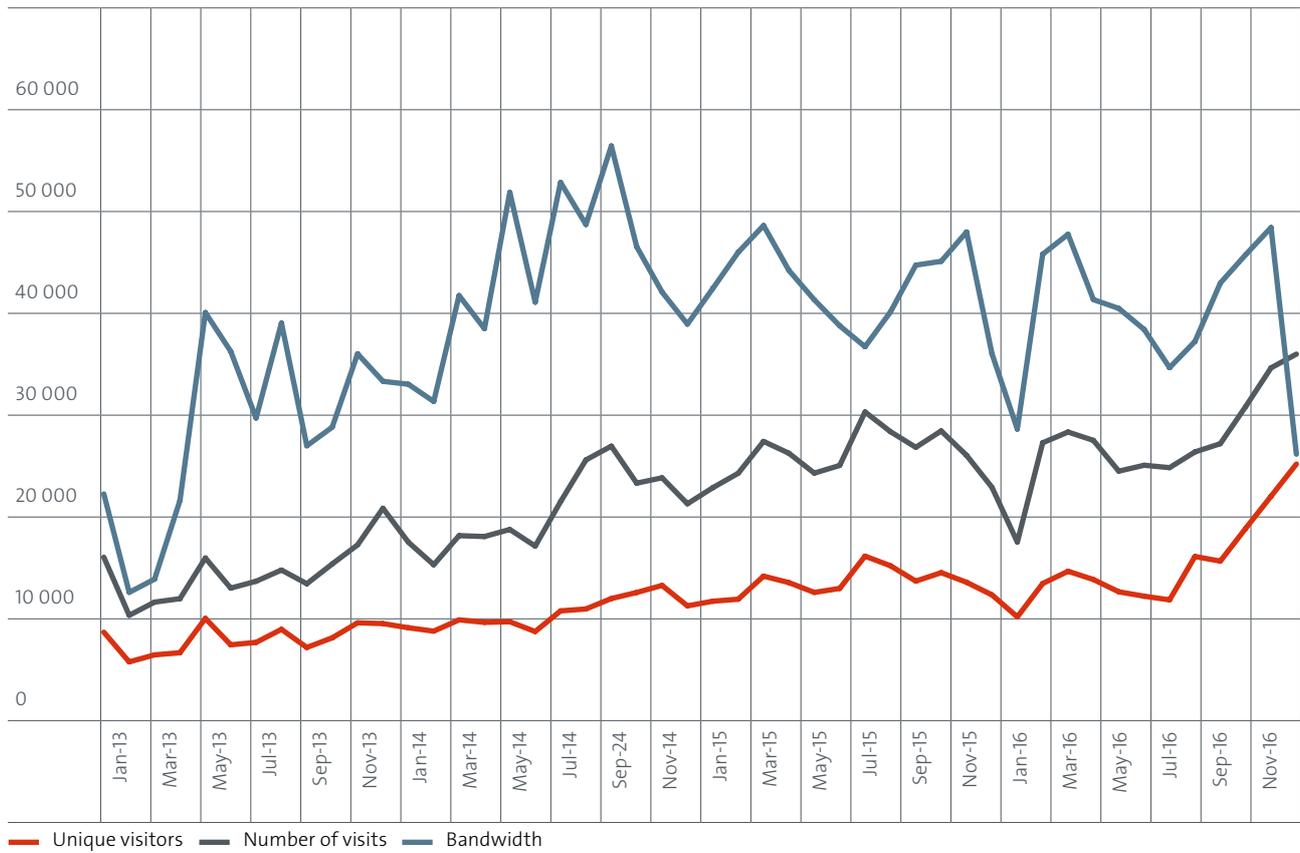
In 2016, the number of visitors and the bandwidth used continued to increase with respect to the 2015 figures. New all-time high figures since the launch of the website were reached with 327,607 number of visits as well as 186,898 unique visitors, i.e. respectively +5,5% and +16,4% increase

2011-2016 Traffic Evolution

The monthly bandwidth usage remained steady in comparison to previous years, at about 40GB per month.



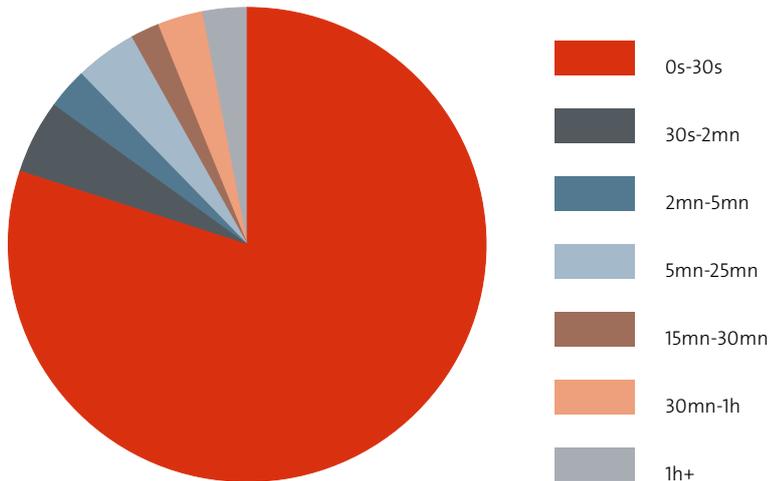
Evolution of the monthly traffic



Looking at the monthly progression, similar trends from previous years were observed. Peaks corresponding to new CPC revision publications are clearly visible.

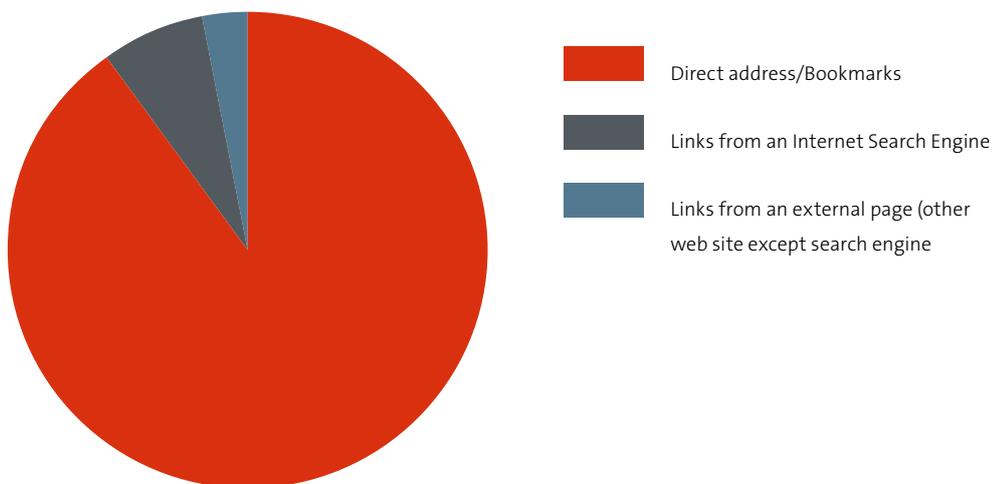
The time spent per visit remained about the same as in 2015. Around 80% of the visits lasted less than 30s. However, the average duration of a visit was of 272s, i.e. a little less than 5 minutes.

Visits duration



Lastly, about 90% of the 2016 visitors arrived at the www.cpcinfo.org website using a direct URL or a bookmark, the others arriving to the site via a search engine or via an external link. These figures indicate that the vast majority of the visitors are recurrent ones.

Origin of Visits



Summary of 2016 Communication Activities

The table below itemises events where CPC was presented / discussed in 2016:

Date	Meeting	Type of Meeting	Host/Venue
23-26 February 2016	CPC Annual Meeting/IPC CE	IPC CE	Geneva, Switzerland
23 February 2016	3rd CPC Annual Meeting with National Offices	Patent Offices	Geneva, Switzerland
7-11 March 2016	IP5 Working Group 1 meeting	IP5	Daejeon, Korea
16 March 2016	3rd CPC Annual meeting with industry users	Industry	Vienna, Austria
14-15 April 2016	71st PDG/IMPACT meeting	Industry	The Hague, Netherlands
23 May 2016	PIUG Annual Conference	Industry	Vancouver, WA
19 September 2016	CPC Annual Meeting with industry	Industry	USPTO -Alexandria, VA
10-14 October	IP5 Working Group 1	IP5	Beijing, China
20-21 October 2016	72nd PDG/IMPACT meeting	Industry	Amsterdam, The Netherlands

- F16M11/2014{around a vertical axis} (—)
- F16M11/2021{around a horizontal axis} (—)
- F16M11/2028{for rolling, i.e. for creating a landscape-por
- F16M11/2035{in more than one direction}

- F16M11/2071{for panning and rolling}
- F16M11/2078{with ball-joint} (—)