



# **Recent development of International Classifications**

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# Overviews

- IPC
- Nice
- Locarno
- Vienna

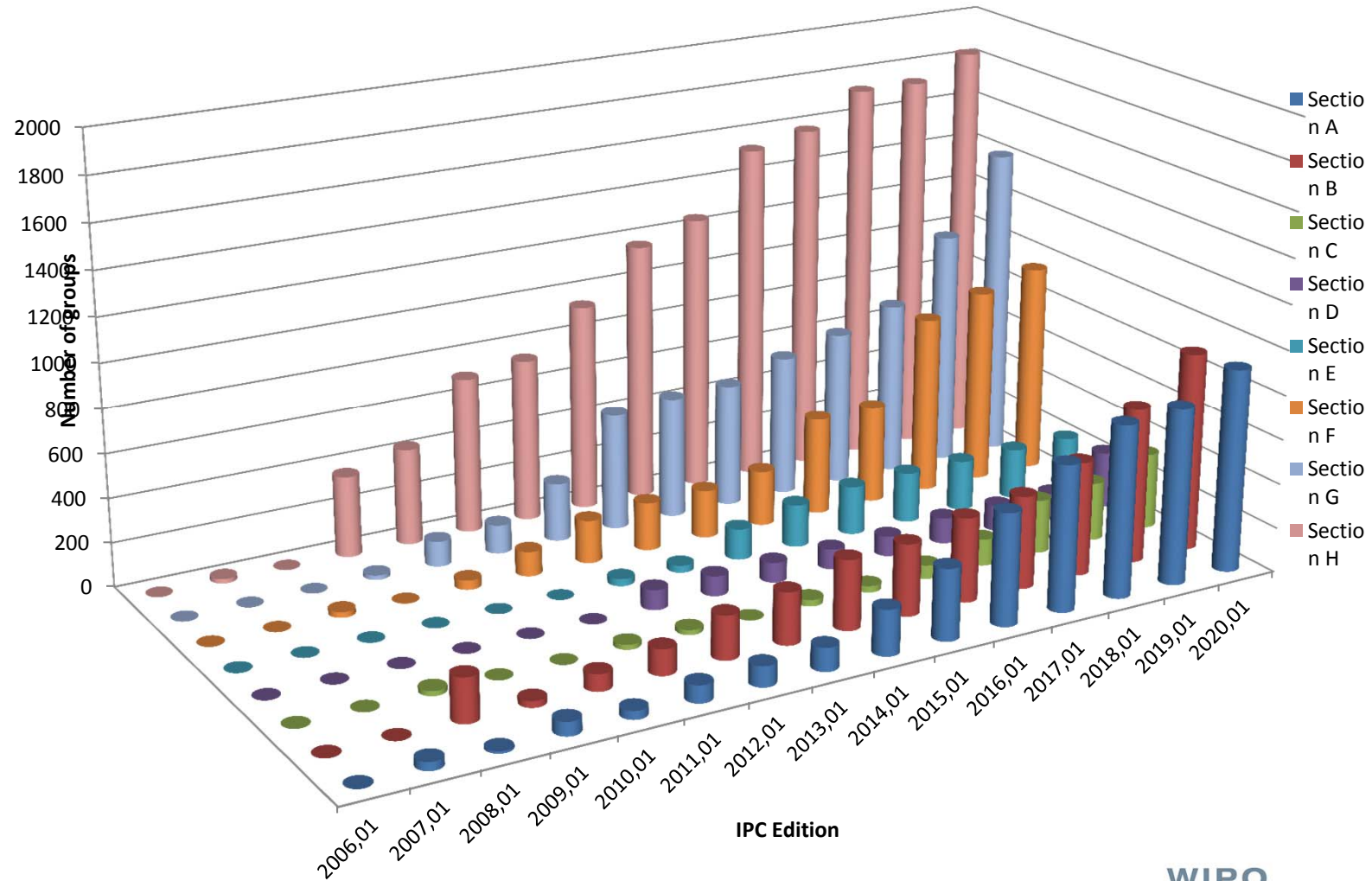
# IPC 2020.01

- Entry into force in Jan. 2020
- Available as Early publication at IPCPUB
- 1773 amendments, including 1131 new subdivisions through the discussion at RWG40 in Nov. 2018 and RWG41 in May 2019

# IPC 2020.01

- The evolution this year clearly indicates that technological developments are intensified in the field of physics, in particular, Information and Communication Technology (ICT) (Section G)
- New groups in the following fields to accommodate applications in relation to new technologies.
  - Internet of Things (IoT)
  - autonomous vehicles
  - 3D printing
  - computer aided design (CAD)
  - natural language processing

# The evolution of number of groups of IPC



# IPC/CE (Committee of Experts)

- 51<sup>th</sup> session was held in February
- H01L (Semiconductor technology):  
Decided to adopt the “New class(es) approach”  
and mandated the Expert group(EGST) to continue  
its work by focusing on this approach only
- Project for handover of reclassification working lists  
management from the EPO to WIPO
- Exchanged experiences of IP Offices on computer  
assisted(ex. AI-based) classification

# **Semiconductor (H01L)**

## **(Overly complex areas)**

- Expert Group was established at CE48 in 2016 to address overly complicated and deeply subdivided structure
- New class(es) approach was decided at CE51
- First physical meeting was held based on the above approach in May 2019
- Next physical meeting will be held in conjunction with RWG42 in Nov. 2019

# IP5/WG1 (Working Group on Classification)

- 19th session was held in March 2019 and virtual technical session was held in Oct. 2019
- Promotion of IP5 projects to IPC phase:
  - 11 projects at the spring session
  - 4 projects at the autumn virtual session
- New Emerging Technologies
  - Artificial Intelligence (AI), Big Data, Intelligent Robots, How to make IPC schemes for NET etc.
  - (3 projects were promoted to IPC phase after the WG1 spring session and concluded at the IPC/RWG41)



# Cross lingual IPCCAT

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## IPCCAT-neural at IPC subgroup level is now cross lingual in 10 languages

October 4, 2019

With the new **cross lingual IPCCAT-neural**, system for automatic text categorization in the IPC, it is possible to perform automatic classification in the IPC at subgroup level through submission of text which can now be either in **Arabic, Chinese, English, French, German, Japanese, Korean, Portuguese, Russian or Spanish**, and get an accuracy of the predictions similar to the one in English, i.e. **84%** for top-three IPC guesses among **73,633** symbols.

IPCCAT-neural combines approximately 8,000 neural networks, 30 million excerpts of patent documents in English already classified (from the "[WIPO EN Delta](#)" dataset) and "[WIPO Translate](#)" services to predict the most relevant IPC symbols with an indicative confidence level for each of them.

IPCCAT-neural is available through the [IPCPUB](#) user interface or using corresponding web service, as documented under [IPCPUB on-line help](#).

# Cross-lingual IPCCAT (through IPC PUBLIcation platform)

The screenshot shows the WIPO IP Portal interface for the IPCCAT search tool. The URL in the browser is <https://www.wipo.int/classifications/ipc/ipcpub/?notion=search&version=20190101&symbol=none&menulang=en&lang=en&viewmode=f&fipccp=no&showdeleted=yes&indexes=no&headings=yes&notes=ye>. The interface includes a navigation menu with 'Scheme', 'RCL', 'Compilation', 'Catchwords', and 'Search'. The 'Search' tab is active. On the left, there are filters for '2019.01' version, 'English version' (selected), 'French version', 'Advanced Search', 'Terms', 'Cross-references', 'STATS', and 'IPCCAT'. The 'Categorization (IPCCAT)' section includes '3' for 'Number of predictions', 'SubG' for 'Classification level', 'English' for 'Input language', and 'A01N' for 'Start From'. The main search area has a 'Search' button and a 'Reset' button. Below the search area, there is a section for 'IPCCAT' with a star icon and 'Predictions'. Four red arrows point to specific elements: arrow 1 points to the 'Search' button, arrow 2 points to the 'English version' radio button, arrow 3 points to the 'English' dropdown in the 'Input language' field, and arrow 4 points to the search results area.

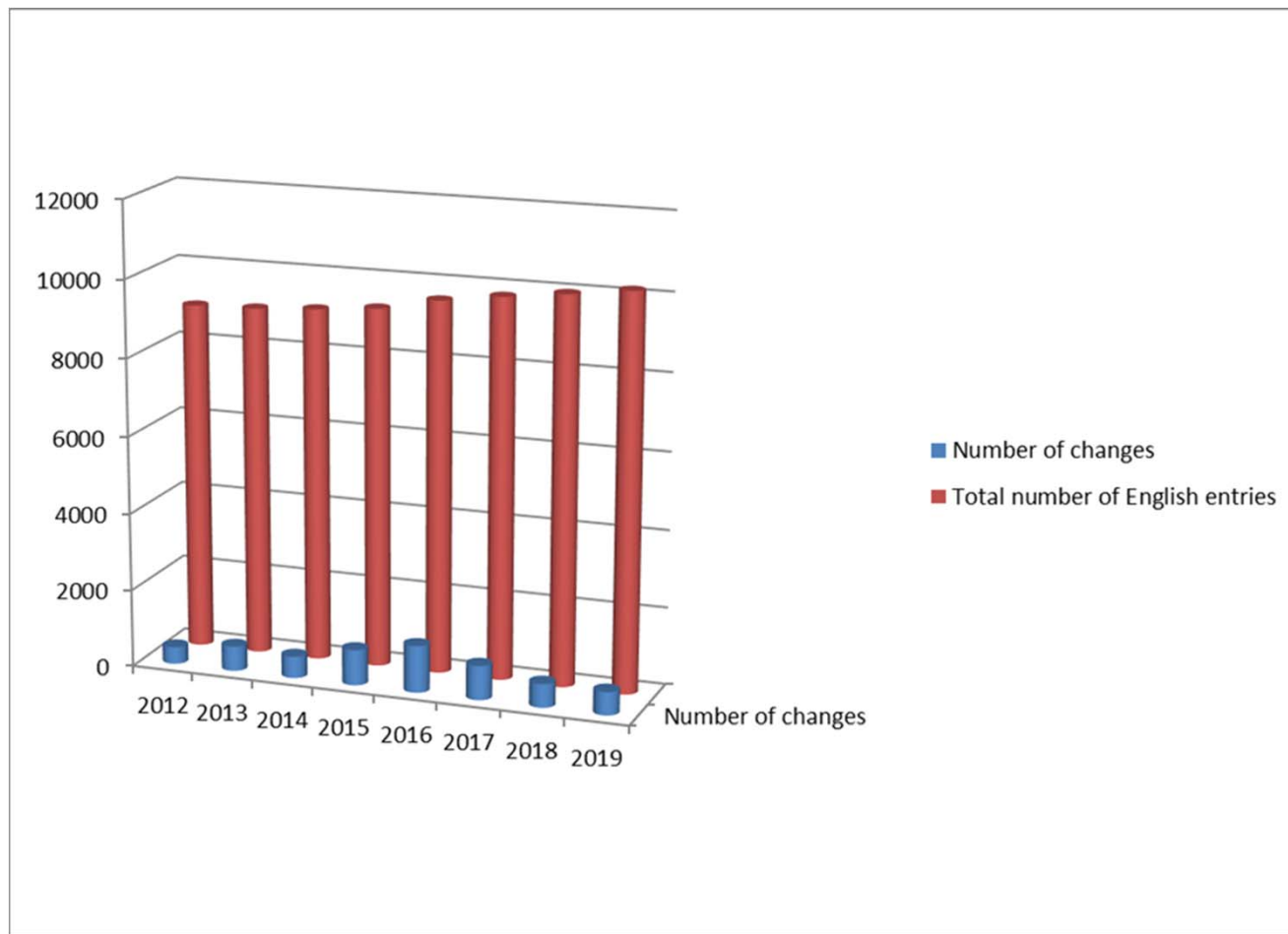
# NCL (11-2020)

- 11th edition from 2017.01
- 29th Committee of Experts in May, 2019
  - Agreed on the criteria regarding typical regional products in classes 29, 30, 31, 32 and 33
- Entry into force in Jan. 2020
- Available as Early publication at NCLPUB

# NCL (11-2020)

- 627 modifications including 402 new entries
  - Cl. 9 downloadable e-wallet, biometric identity cards
  - Cl. 10 nanorobots for medical purpose
  - Cl. 36 e-wallet payment services, financial exchange of virtual currency, crowdfunding
  - Cl. 37 charging of electric vehicles
  - Cl. 39 piloting of civilian drones
  - Food products based on the new criteria
  - Class heading revision in 6 classes

# NCL (11-2020)



# Future development of Nice Classification

- Nice Classification Revision Management System (NCLRMS)
  - Preliminary Electronic voting
  - Proposals from Madrid Goods and Services

## LOC (12)

- Entry into force in Jan., 2019
- 823 modifications and the creation of 19 new subclasses
- 14th Committee of Experts in Nov., 2019
  - Proposals are available as LO142 at E-Forum
- LOC(13): Jan., 2021

# Vienna Classification

## Questionnaire on the future development

- The survey was conducted in 2018
- The result is available as QV001 at E-forum, to be discussed at the next Committee of Experts

34 responses (32 Contracting Parties of the WIPO Convention, one International Intergovernmental Organization and one Non-governmental Organization)

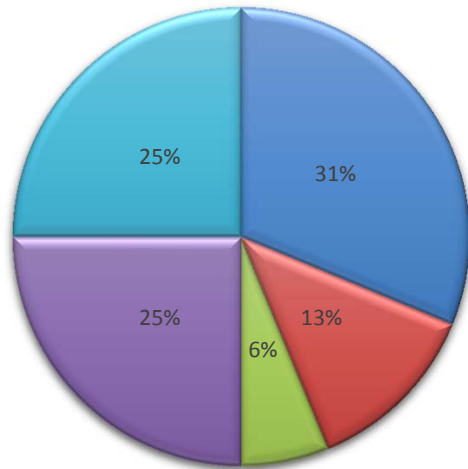
### ■ Questions:

- VCL Structure and revision
- Automatic image recognition technology



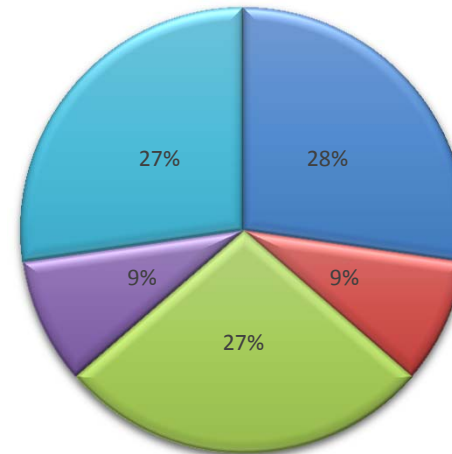
# VCL Structure and revision

Desired revision frequency non-VCL Contracting Parties



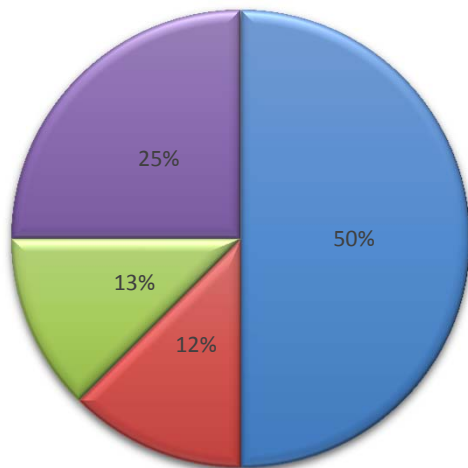
■ 5 years ■ 3 years ■ 2.5 years ■ 2 years ■ 1 year

Desired CE meeting frequency VCL Contracting Parties



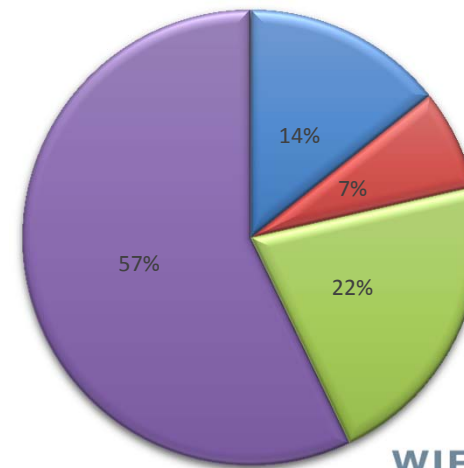
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Desired revision frequency VCL Contracting Parties



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Desired CE meeting frequency non-VCL Contracting Parties



■ 5 years ■ 3 years ■ 2 years ■ 1 year

# Automatic image recognition technology

- 11 out of 34 responses indicated that they currently use search systems that use automatic image recognition technology, representing 32%
- 32 out of 34 responses indicated that the VCL will continue to be useful, taking into account the recent development of such search systems, representing 94%
- 11 out of 34 responses indicated that some changes should be made to the Vienna Classification and its direction, taking into account the recent development of such search systems, representing 32%

**Thank you for your attention !**