

**UNITED STATES  
PATENT AND TRADEMARK OFFICE**



# Patents artificial intelligence tools

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# Patent auto-classification

**Vision: Develop auto-classification system to generate CPC data to meet internal needs and international obligations for classification.**

- The USPTO is developing and validating an AI-based auto-classification system
  - Full classification of patent documents
  - Identification of CPC symbols associated with claims (called C\* or “C-stars”)

CPC allocations	C*
G01S 7/4863	★
G01S 7/4865	★
G01S 7/4917	
G01S 13/89	★
G01S 7/4914	★
G01S 17/894	

# Current activity in auto-classification

- Auto-C\*

- Implementation of auto-C\* started December 2020; monitoring of quality data
- Quality assurance process – limited sample of applications immediately following classification

	<b>+/- agreement with CPC + C*</b>	<b>+/- agreement of C* when underlying CPC is correct</b>
<b>Auto-class C* vs. control (250 applications / month)</b>	<b>- 1.7%</b>	<b>+ 0.6%</b>

- Classification challenge process – review of classification after application assigned to an examiner
  - Pilot ongoing through July to accelerate data capture

- Full classification

- Currently AI models produce ranked list of CPC symbols for patent applications
- Patent documents have a subset of CPC symbols (typically a few to a dozen) assigned
- Development of CPC symbol assignment capability underway



# AI-based search tools for patents



- **Prototyping**
  - Developing next AI prototype capabilities: new similarity-based sorting, document clustering
  - Refining user experience of matured AI prototypes to prepare for full release
- **Operationalization**
  - Preparing cloud infrastructure to support releases of AI capabilities to full examining corps
  - “More Like This” will be first AI capability available to all examiners with PE2E Search
  - Identification of further AI capabilities for full release underway
- **Value Determination**
  - Testing approaches and infrastructure for metrics capture are both under development



# Thank you!

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