

Patents and artificial intelligence

25th Annual Advanced Patent Law Institute (live webcast) November 6, 2020 Robert Bahr Deputy Commissioner, USPTO



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Agenda

- Artificial intelligence (AI)—an overview
- USPTO engagement on artificial intelligence
- USPTO and artificial intelligence IP policy
- Patents: Al-related issues

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Al overview

- · No universally recognized definition
 - Generally understood as computer functionality that mimics cognitive functions associated with the human mind (e.g., the ability to reason, generalize, discover meaning, and learn from past experience)
- Al is increasingly becoming an important tool across a diverse spectrum of technologies and businesses
- Al uses
 - Voice-powered personal assistants like Siri and Alexa
 - Autonomous vehicles
 - Forecasting models predicting weather patterns
 - Precision agriculture that detects disease, pests, and poor plant nutrition on farms
 - Fraud detection in banking
 - Cybersecurity

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USPTO activities on AI policy

- Stakeholder engagement
 - January 2019 Al IP Policy conference
 - August 2019 Request for comments (RFC) on AI patent issues
 - October 2019 RFC on other IP rights impacted by AI (e.g., copyright)
- Collaboration with international IP offices
 - October 2018 IP5 Expert roundtable on artificial intelligence
 - November 2019 JPO Al symposium
- Requests for information (RFIs)
 - October 2018 USPTO's challenge to improve patent search with AI
 - September 2020 Al for design patent applications
- Reports
 - October 2020 Public views on Al and IP policy (Al report)

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Al tools in USPTO operations

• Auto-classification of patents

- Leverages machine learning to automatically classify patent documents in CPC, replacing current practice of manual classification by contractors
- Currently assessing results and maturing prototype functionality with input from classification experts
- Expectations: operational efficiency and quality improvement

· Patent Al prototype for search

- Cloud-based solution; identifies documents and suggests search areas
- Beta test in March 2020 to ~500 users
- Expectations:
 - Search effectiveness, broader search across technology areas
 - Al learning improves search models over time

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USPTO and artificial intelligence IP policy





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