

Patents and artificial intelligence

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Agenda

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



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AI 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)
- **AI is increasingly becoming an important tool across a diverse spectrum of technologies and businesses**
- **AI 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 AI 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 AI symposium
- **Requests for information (RFIs)**
 - October 2018 USPTO's challenge to improve patent search with AI
 - September 2020 AI for design patent applications
- **Reports**
 - October 2020 Public views on AI and IP policy (AI report)

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AI 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 AI 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
 - AI learning improves search models over time

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USPTO and artificial intelligence IP policy

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[AI Claims and Evolving Guidance from the USPTO](#)

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"AI Claims"