Artificial intelligence for patents

Matthew Such, Group Director, TC 2800
February 6, 2020
Patent Public Advisory Committee quarterly meeting
AI as a strategic focus

• 2018-2022 USPTO Strategic Plan:
  – Optimize development and delivery of information technology tools, including artificial intelligence and machine learning, for internal users of patent systems to ensure that they have the tools they need for a thorough search and examination.*

* Goal I: Optimize patent quality and timeliness; Objective 3: Foster innovation through business effectiveness
Challenges with AI

• AI is trained, not pre-programmed
• Performance of AI depends on quality data
• Models may not be generalizable
• Perception of a “black box”
• Expense of intellectual validation
• Models may require continuous updates
Strategy for reliable AI

- Curation of high-quality data is critical
- Apply solutions for validation and refinement
- Expand practical knowledge in AI
  - USPTO IT professionals must “do AI well”
  - Patent and Trademark businesses must “think in AI”
- Extensive outreach and market research
- AI is for augmentation
- Explainable AI
AI priorities in FY20

Operational goal: leverage AI to improve effectiveness of examiners and the agency

• AI for enhanced search
  – Awareness campaign for AI-based features
  – Investigate new AI for search and image recognition

• CPC auto-classification
  – Full CPC classification
  – C* Detection
Thank you!

Matthew W. Such
Group Director, TC 2800
matthew.such@uspto.gov
571-272-1570
www.uspto.gov