Artificial intelligence (AI)/IT updates

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Bob Simms, Director, Office of Infrastructure Engineering and Operations
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November 18, 2021
Patent Public Advisory Committee quarterly meeting
### Resilience and cloud

<table>
<thead>
<tr>
<th>Resilience / Data Center: FY21 milestone achievements!</th>
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<tbody>
<tr>
<td>• Boyers Data Center migration to Manassas Data Center Completed Successfully!</td>
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<td>• NOAA N-Wave implementation; Increased Service Levels, Redundancy, Cost Savings.</td>
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<tr>
<td>• Data Center migration assessment and Business Product migration roadmap Successfully Completed</td>
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<td>• Video Surveillance &amp; Physical Access Control system setup in Manassas and integrated with Alexandria</td>
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<th>Resilience / Data Center: To FY22, and beyond!</th>
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<tr>
<td>• Continue to Prepare Manassas Data Center for Alexandria Data Center Migration</td>
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<tr>
<td>• Start Phase 2 of Data Center Relocation (Mid Jan 2022)</td>
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<tr>
<td>• Migrate Alexandria Data Center to Manassas VA: (Mid Jan 2022 - April 2023) - Move bundle methodology</td>
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<tr>
<td>• Testing / Clean-up / Troubleshooting: (Mid Jan 2022 - April 2023) - at end of each migration bundle to ensure Full Product Operability</td>
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<th>Cloud: FY21 milestone achievements!</th>
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<td>• Product migration: USPTO Website, MYUSPTO, FPNG</td>
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<td>• New cloud product: Patent Search AI (Google), PEDS featured with IFW data as alternative to Public PAIR</td>
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<td>• Cloud platforms: Amazon Web Services (AWS), Google (GCP), and Azure all received Operational Status</td>
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<td>• Cloud intakes process: Established a Business Centric assessment to assist products migrating to the cloud</td>
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<td>• Innovation: Released Google RADLAB; paid service for teams in Google platform to experiment / innovate</td>
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<td>• Products under Development: Public Patent Search, Examiner Patent Search, Global Dossier, Event Bus (EAI-HUB Replacement); initial release ~mid 2022</td>
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<tr>
<td>• Product Migration: Conduct FY22 Cloud Assessments to position additional product migrations in FY23</td>
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<td>• Cloud Contracting: Five Year Enterprise Cloud Modernization (ECM) support contract awarded to GDIT</td>
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<tr>
<td>• Cloud Cost Management: Analyze current cloud usage and create cost savings plan for FY22</td>
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Cybersecurity

• Last quarter
  - Completed deployment of Endpoint Detection and Response capability (EO 14208; OMB M-22-01)
  - Integrated Security Orchestration & Automated Response (SOAR) and User Behavior Analytics (UBA) capabilities for improved monitoring and incident response
  - Improved secure configuration benchmarks for IT assets
  - Integrated cloud threat detection services into our Security Operations Center

• Next quarter
  - Integrate supply chain risk assessments and updated cybersecurity requirements into acquisitions
  - Improve cloud security monitoring and incident response
  - Deploy Cloud Security Posture Management capabilities
  - Begin integration of new/updated federal security and privacy controls (NIST SP 800-53 rev5)
Filing in DOCX

- Overview of DOCX video available on the USPTO YouTube channel and on the DOCX landing page: www.uspto.gov/patents/docx

- Upcoming DOCX filing training sessions:
  - November 23, 2021 (1:00 PM ET – 2:00 PM ET)
  - November 30, 2021 (2:00 PM ET – 3:00 PM ET)
  - December 9, 2021 (1:00 PM ET – 2:00 PM ET)
  - Watch for additional events at www.uspto.gov/about-us/events/patents-docx-filing
  - More than 14,000 users have been trained on filing in Patent Center

- Patent Center training mode
  - Data entered will not be saved or submitted to USPTO systems
  - Applications filed will not be associated with customer number
Artificial Intelligence Search: FY21 milestone achievements!

- Identified AI functionality from prototype for full production deployment
- Tuned infrastructure for production level deployment
- Released “More Like This Document” to examiners transitioned to PE2E Search on October 15
- Retrieves most similar documents by user selection
- Includes US patents/pubs and patent documents from the 61 foreign countries loaded into Search

Artificial Intelligence Search: To FY22, and beyond!

- Expand availability of PE2E Search with “More Like This Document” to full examining corps
- Identify and build additional AI functionality for full production deployment
- Include application data to support AI-based queries
- Continue assessment of AI search functionality to determine value for search and new opportunities

Autoclass: FY21 milestone achievements!

- Evaluated AI auto-C* models for of C* symbol placement
- Integrated auto-C* with existing business processes to monitor quality
- Implemented auto-C* for a portion of new utility filings for operational efficiency in December 2020
- Monitored quality of auto-C* to assess the readiness for expansion
- Updated AI models for full classification picture on utility applications for further assessment

Autoclass: To FY22, and beyond!

- Assessment of updated auto-full classification models
- Exploration of pilot for auto-full classification
- Identification of impacts that implementation of auto-full classification will have on existing business processes
- Consideration of additional AI use cases for classification process
- Leveraging data streams on quality to assess business impacts and opportunities
Questions and comments

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