Panel 4 - Ms. Daria shipitsyna

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Rospatent

Federal Service for Intellectual Property



Head of Strategic Communication Center, the Federal Institute of Industrial Property

DIGITAL TRANSFORMATION OF ROSPATENT: OUTCOMES AND OPPORTUNITIES

April 6, 2022

OBJECTIVE OF DIGITAL TRANSFORMATION





increasing the satisfaction of citizens and organizations with the quality of public services in the field of IP by means of digitalization, excluding the need for a personal visit

Tasks



Creation of digital interaction services for all categories of citizens



Access to the information on the status of public services via the Rospatent and Public services portals



Reducing the time for public services delivery



Online registration of applications and disposal of rights



Access to patent information, statistics and analytical materials for the state agencies and business community in real-time



Information security and confidentiality of applicants' data

USER-ORIENTED PRINCIPLE





Development of digital solutions focused on customers' needs



USER STEPS

Building technological concept, creating R&D projects

Ensuring legal protection

Commercializing



CLIENT SERVICES Patent information search

3D Model

Enclosure

Patent statistics and analytics

Digital communication

3D Model

Comparison

Online IPR management

Patent information

search

Online IPR management

Checking IP for encumbrances

Search for trademarks and industrial designs

Digital communication



Preliminary
assessment of
global novelty level
of the future
invention

Identification of technological trends

Filing an application with Rospatent, obtaining an electronic title of protection Finding a partner, obtaining rights to related results of intellectual activity to establish a trusted environment around the final technological solution

Receiving income from the IPR disposal, registering an agreement on the disposal of rights in an expedited manner

Developing and registering a brand as part of a marketing strategy

ROSPATENT DIGITAL TRANSFORMATION





SMART SEARCH

Flexibility, Customization, Administration







Public services

Public functions

Modern technologies, Single infrastructure

Supporting processes



PUBLIC SERVICES

SYSTEMS

OPERATIONS

- Search Platform
- Online Rospatent
- Management of administrative processes
- Integration and management of legal and reference information
- TM and ID examination
- IPR management
- Digitalization
- Document management
- Single State RegisterSingle data storage
- 3D
- Supervision of intellectual activity results
- Management of centralized maintenance and support of IT infrastructure and users
- Internal Portal
- Formal checks portal
- Administrative decisions support



International

cooperation

REGISTRATION AND SUPERVISION OF IPR MANAGEMENT DATA



State register of the intellectual activity results



A single model of technological, legal and reference information, international standards

National patent collection



International patent collection

Performance

INFRASTRUCTURE



Neural networks implementation

- GPU
- networking hardware



Modern workstations

- equipment
- drivers
- OS Astra Linux

Import substitution



Free software and national developments

- LibreOffice
- Foresight
- Camunda BPM

TECHNOLOGIES

- Al computer vision
- Al classification

- Al text analysis
- Information security

- BIG DATA
- Blockchain
 WIPO FOR OFFICIAL USE ONLY
- Omnichannel
- Al-based OCR
- 3D models

OLAP

- Seamlessness
- Al translation

OUTCOMES OF DIGITAL TRANSFORMATION IN 2019 - 2021



5 Online applica	
	tent are available in electronic format yes
	ion filing and registration 27
NO Issuance of ele	ctronic titles of protection yes
NO Online	disposal of rights yes
NO Professional search for	trademarks and industrial designs yes
NO '	the International patent collection and patent analytics allow elopment of technological trends
60% High rates of search relevance for	inventions due to the use of AI technologies 80%
NO Filing 3D-models visual representations	of Inventions, Trademarks and Industrial Designs
NO Free Acces	ss to Patent Big Data yes

Beneficiaries











Professionals

SEARCH PLATFORM OF ROSPATENT



Transition from a traditional software solution for retrieving patent documents to a platform comprising a wide range of services for data mining



The service ensures that at least 95% of search queries are executed within 1 sec since a query was accepted before the first result appears

The search service is capable of maintaining simultaneous work of at least 10 000 users dropping its queries processing speed no more than twice

Basic Technologies:

Elasticsearch, MongoDB, Apache Kafka, Spark Streaming, Hbase, Hadoop, Al

IMPLEMENTATION IMPACT

Access to search services for stakeholders

Interaction with external resources

Principles of inclusiveness and accessibility of information

Free public access

Determining technological trends and commercialization areas

Improving the quality of patent search and examination

ARTIFICIAL INTELLIGENCE AS A BASIS FOR IP ECOSYSTEM INTEGRATION PROSESSES



Machine translation of patent documents and classifications

December 2021

Similarity search within the patent search system for examination of patent and utility model applications

designDecember 2021

New search engine for

trademarks and industrial

December 2021

Key areas of AI implementation at Rospatent

Automated classification services for document

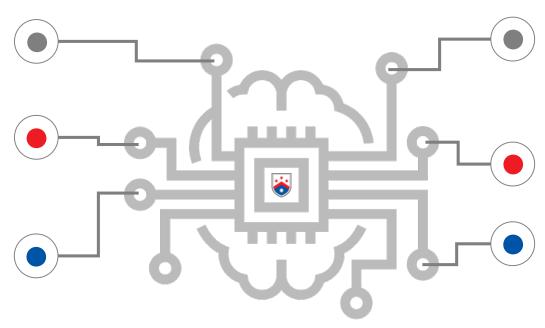
(IPC, CPC, Nice classification)

Quality improvement of structured data

Smart search for trademarks and industrial designs

Professional translation of patent document (10 various languages)

Reducing the time for data updates and increasing the relevance of world prior art



Forecasting services based on statistical models

- Patent activity monitoring based on algorithms of machine learning
- Forecasting the development of technological fields given the current situation

Online registration of IPRs

(Computer programs, trademarks, industrial designs)

Applications processing services

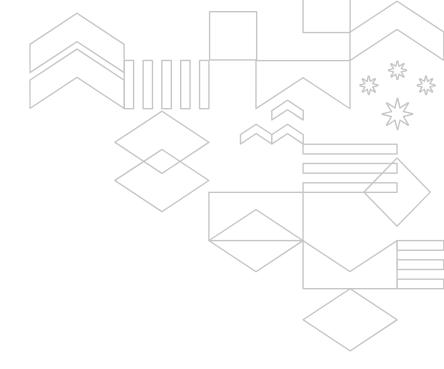
- prioritization of applications taking into account strategic state directions
- automatic recognition of poor-quality repeated applications
- dataset markup tools

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THANK YOU FOR YOUR ATTENTION

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