ARCHIVING OF WEBSITES AND BORN-DIGITAL DOCUMENTS IN SLOVAKIA

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8th Colloquium of Library and Information Experts of the V4+ Countries
19.6.2019

digitálne pramene

ÚRAD VLÁDY SLOVENSKEJ REPUBLIKY

MINISTERSTVO KULTÚRY SLOVENSKEJ REPUBLIKY

EURÓPSKA ÚNIA

OPERAČNÝ PROGRAM INFORMATIZÁCIA SPOLOČNOSTI

TVORÍME VEDOMOSTNÚ SPOLOČNOSŤ

univerzitná knižnica v bratislave

NATIONAL PROJECT DIGITAL RESOURCES

- web archiving in Slovakia - first attempts 2005/2006 - ULIB participated in project Web Cultural Heritage
- there were no needed legislative, organisational and technical conditions for systematic harvesting and archiving of web pages and original electronic resources in Slovakia
- 2015 – University Library in Bratislava - national project
- Digital Resources – Web Harvesting and e-Born Content Archiving
- implementation: 01. 04. 2015 – 31. 12. 2015 (application development, ICT installation, pilot harvests)

DIGITAL RESOURCES – ORGANISATIONAL SUPPORT

Digital Resources Project - Mission & Goal:

- to create the technological and organisational infrastructure for systematic and controlled web harvesting and born-digital archiving
- to archive Slovak websites and born-digital content (electronic monographs and electronic serials) as an integral part of the Slovak Cultural Heritage

Organisational support:

- Deposit of Digital Resources (National ISSN Centre and Deposit of Digital Resources) – created in 2015
- external capacities: support – Service Level Agreement

DIGITAL RESOURCES – ORGANISATIONAL SUPPORT

2019 – the fourth year of sustainability of the project

Deposit of Digital Resources – staff:

- Head of the Department (manager)
- Curator I - Administrator of the Information System for Digital Resources
- Curator II - Web Archive Curator
- Curator III – Born-Digital Archive Curator
- Manager and part-time person for Born-Digital Resources

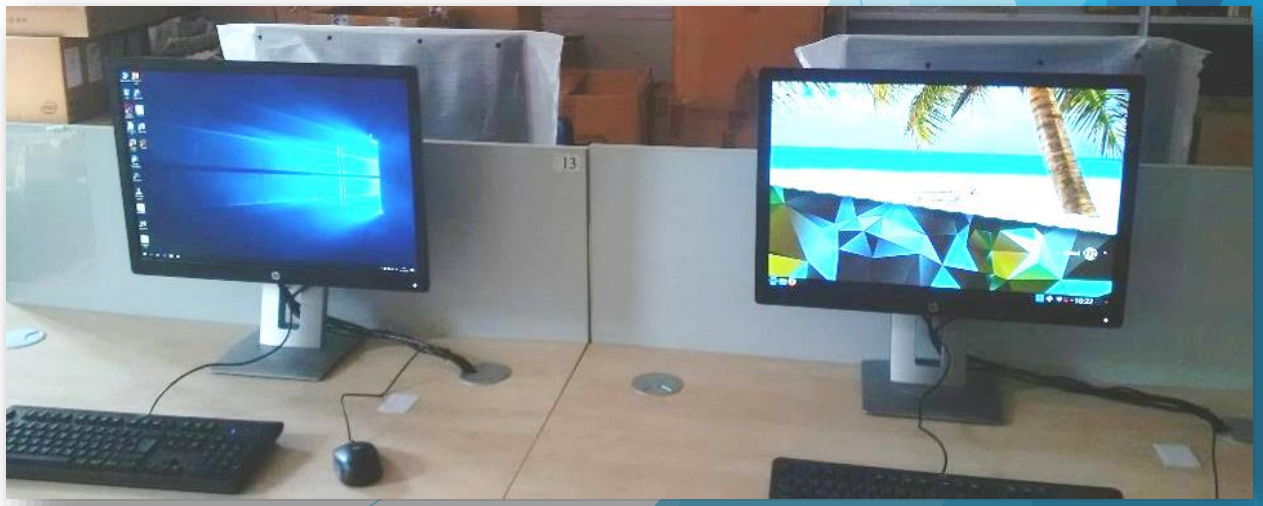
DIGITAL RESOURCES – TECHNICAL INFRASTRUCTURE

- powerful HW infrastructure - Public and Internal Portal, 24 virtual servers
- system management is optimized for multiple harvesting processes (239 workers, each one has 15 Heritrix harvesters)
- there is an identical parallel testing environment, which enables test harvesting and problem analysing without interference of the production processes
- the system disposes with 800 TB storage
- application and system SW - open source technologies: Heritrix, DeDuplicator, OpenWayback, SOLR, JAVA, Invenio etc.
- support services: Backup, Monitoring, Communication, Antivirus...

ACCESS TO THE ARCHIVE

- according to the actual Copyright Act
- 3 types of access: public, local and forbidden
- default: without public access
- a limited number of archived websites and electronic publications is available publicly (Open Access, Creative Commons and agreements with provider/publisher)
- local access to the archived content

  in the ULIB research room

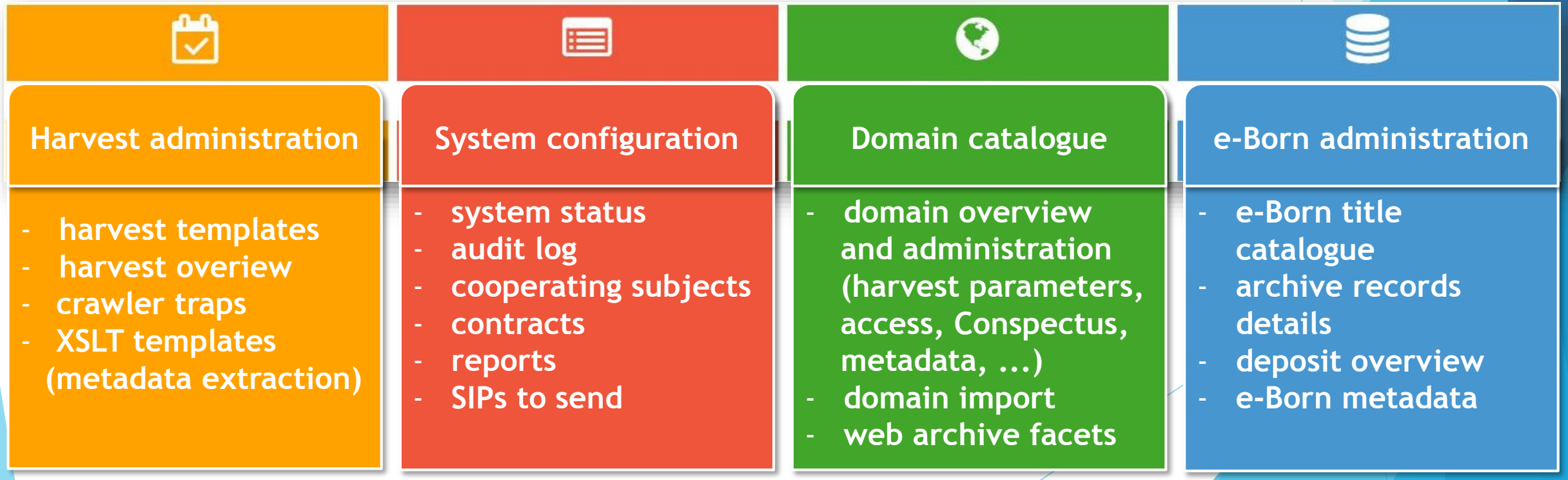


ARCHIVING OF ELECTRONIC PUBLICATIONS

- specific feature of our system – both websites and born-digital content (electronic serials and monographs with assigned ISSN/ISBN)
- 856 787 WARC files and 612 PDF files (14.6.2019)
- 144 serial titles, 59 monographs (14.6.2019)
- National ISSN Centre - cooperation from the beginning (2015)
- the Slovak National ISSN Database – the source of e-serials titles
- archiving is a preparation for the future Legal Deposit Act for born-digital content

INTERNAL PORTAL - CURATOR INTERFACE

- 2x test virtual platform
- 1x production platform
- divided into 4 parts

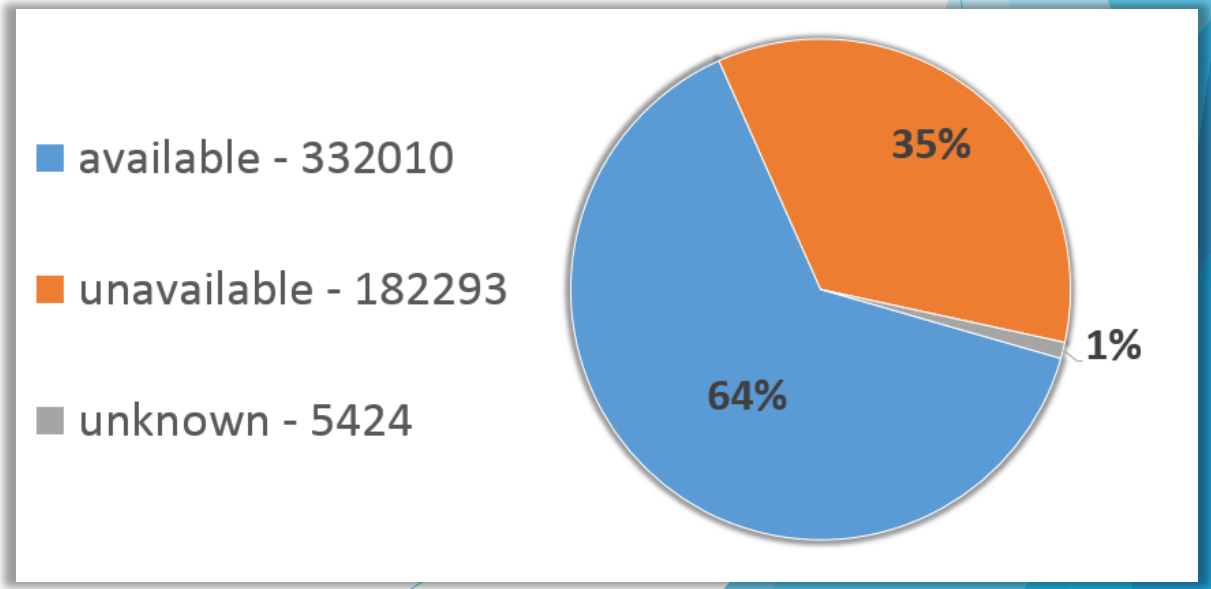


WEB RESOURCES CATALOGUE

- nic.sk - current number of registered .sk domains 394 462 (14.06.2019)
- number of domains in the DIR catalogue: 519 727 (12.06.2019)
- other domains of slovacical character – content, author or language:

  .eu (209), .com (109), .org (72) .info(35), .net(21), .cz (14),

  other (23) - added into the catalogue manually
- Domain status in the catalogue:



WEB HARVEST POLICY

- respecting robots.txt
- agreements => respecting limitations
- harvest types: selective, thematic, full-domain (complex)
- formats: generally no audio, video files, streams, social networks

	2016	2017	2018	2019 done	2019 planned
Selective	7	11	14	5	9
Thematic	4	2	5	6	1
Full-domain	1	1	1	-	1
Σ	**12**	**14**	**20**	**11**	**11**

Table: Web harvest campaigns

HARVEST TYPES - 1: SELECTIVE HARVEST

- focus: Conspectus categories and contracted URLs
- contracted URLs - ignoring robots.txt, but respecting limitations in the agreement
- Conspectus - meta 072_7$x
- agreement number - meta 542__n
- 2 GB, 3 days/ domain

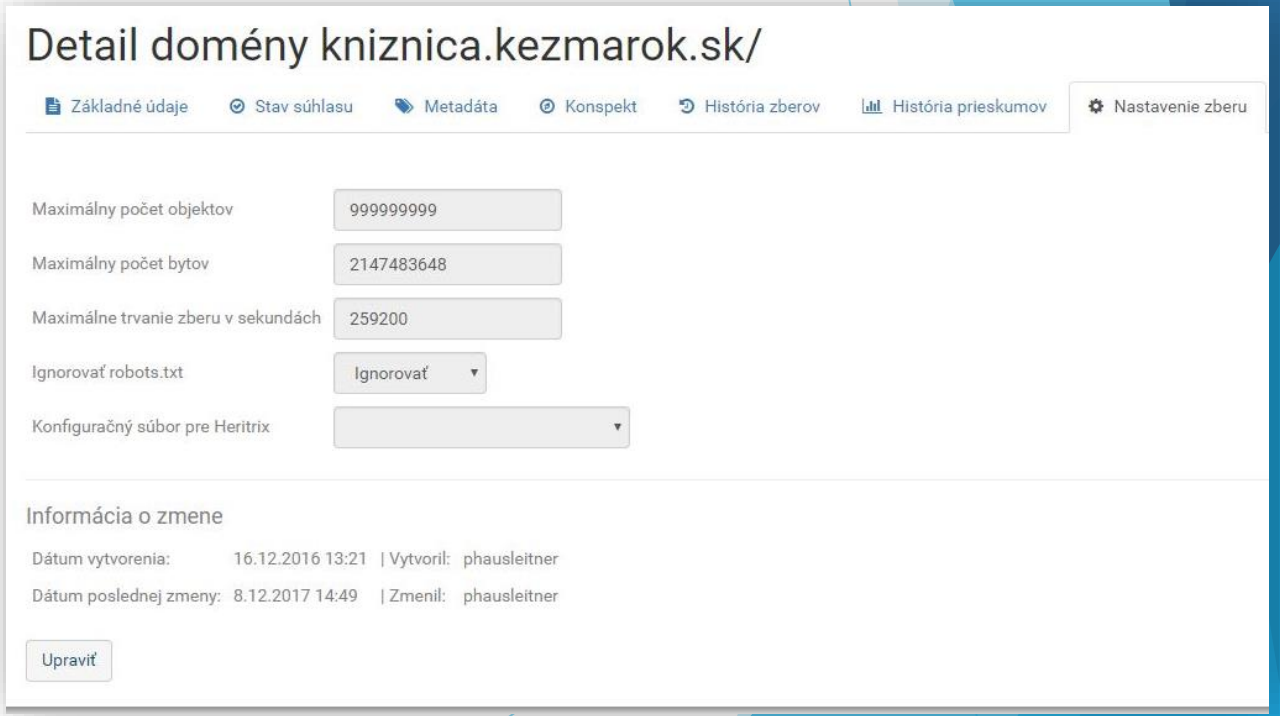


Image: harvest settings for contracted domain

HARVEST TYPES – 2: THEMATIC HARVEST

- thematic (event) harvest
- 2 GB, 2 days/ domain
- elections (presidential, europarliamentary, regional),

Olympic Games, IIHF Championship, ...

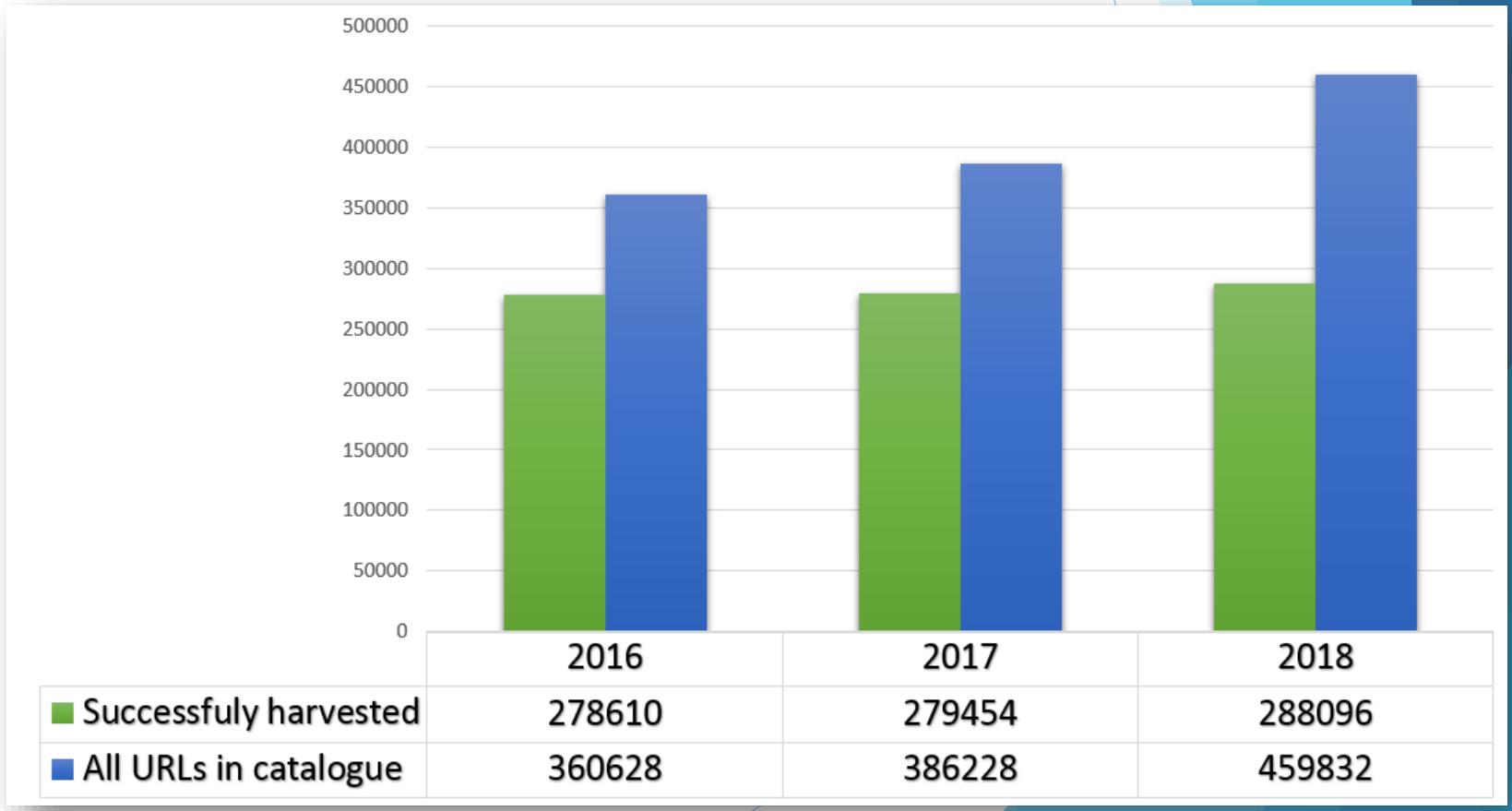
- respecting robots.txt

archived

Source (accessible in ULIB): https://search.webdepozit.sk/webarchiv/kniznica/20190401151552im_/https://m.smedata.sk/api-media/media/image/sme/9/41/4109789/4109789_600x400.jpeg?rev=3

HARVEST TYPES – 3: FULL-DOMAIN HARVEST

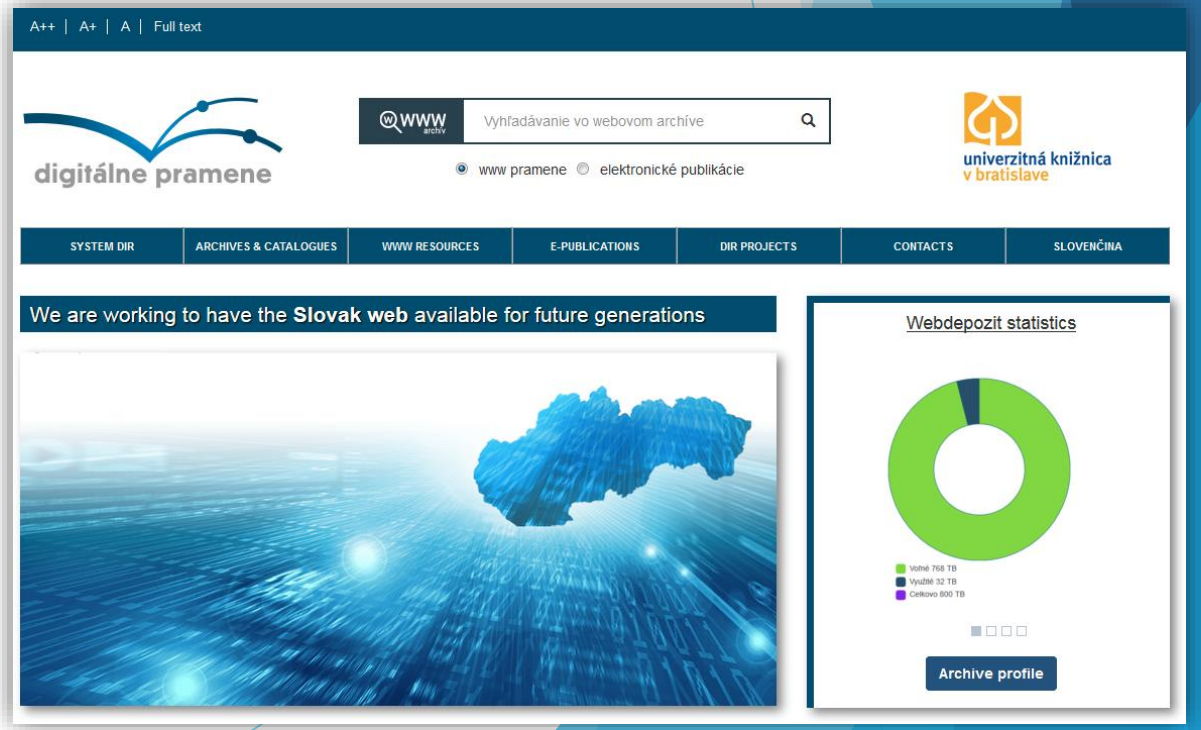
- harvest of all domains in the catalogue
- once a year
- parameters/ one seed:
  - max. size 400 MB
  - 10 000 objects
  - max. time 2 hrs.



	2016	2017	2018
Successfuly harvested	278610	279454	288096
All URLs in catalogue	360628	386228	459832

PUBLIC PORTAL

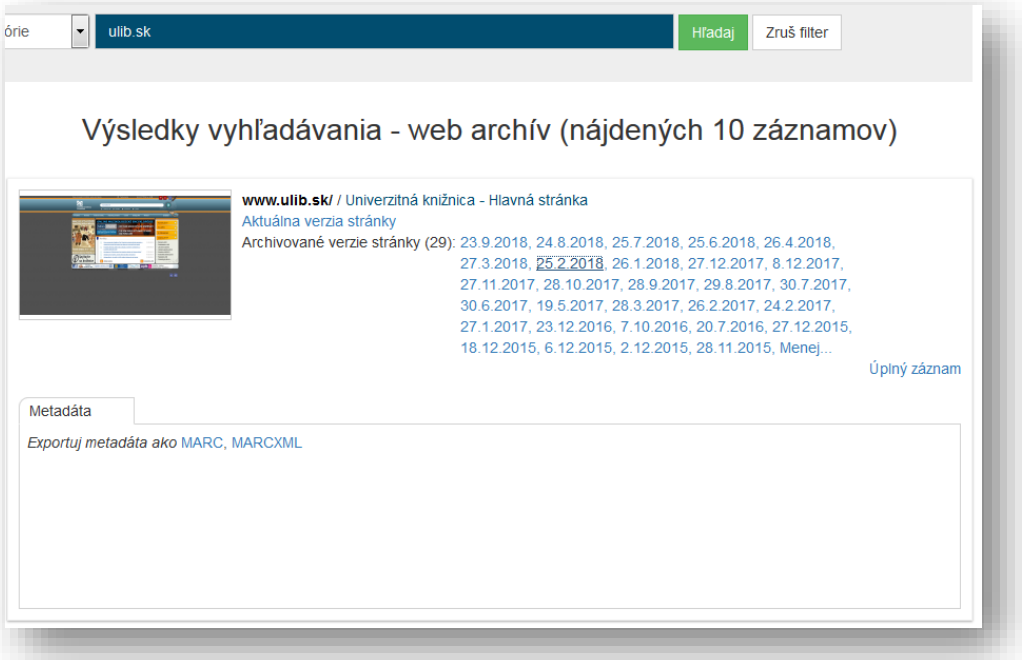
- a lot of information for publishers including forms for publication submission/suggestion
- frontend for web archive and e-publications archive
- plenty of information about our activities
- made in Wordpress
- simple and advanced search

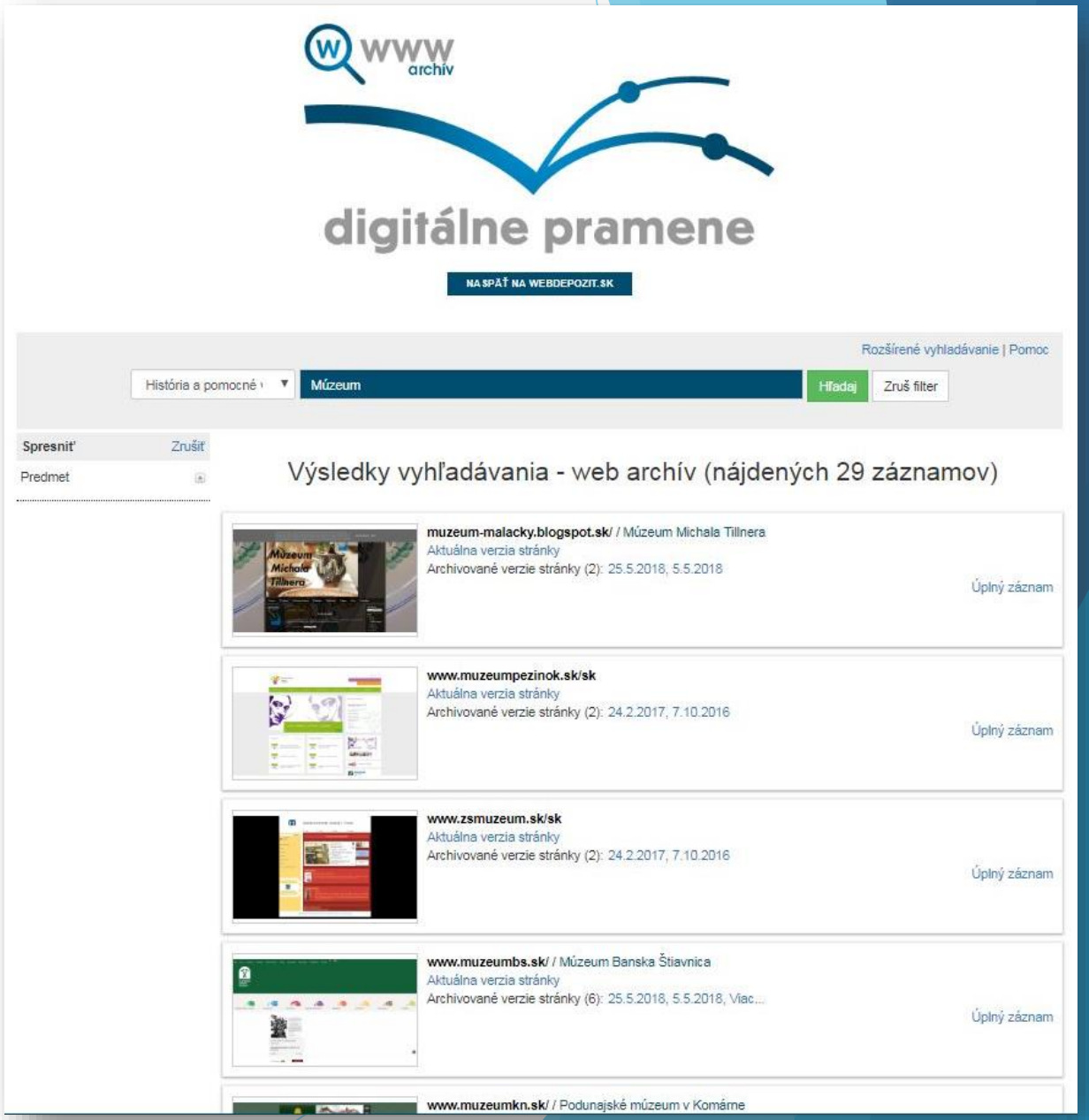


https://webdepozit.sk

SIMPLE SEARCH

- search in all metadata fields
- filtered by Conspectus categories
- links to live websites and archived versions

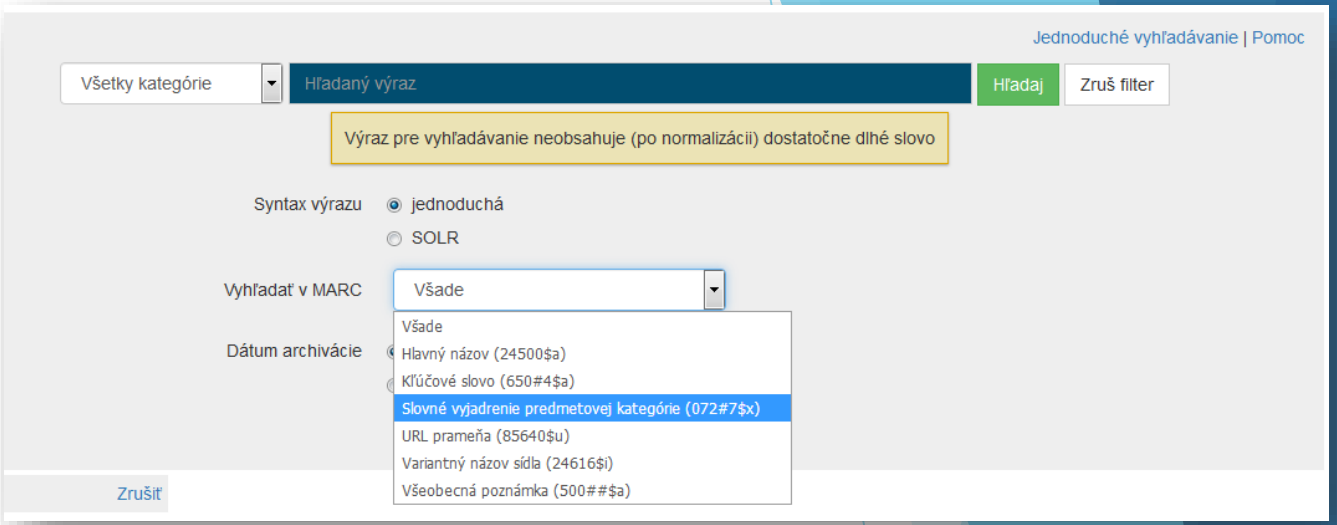


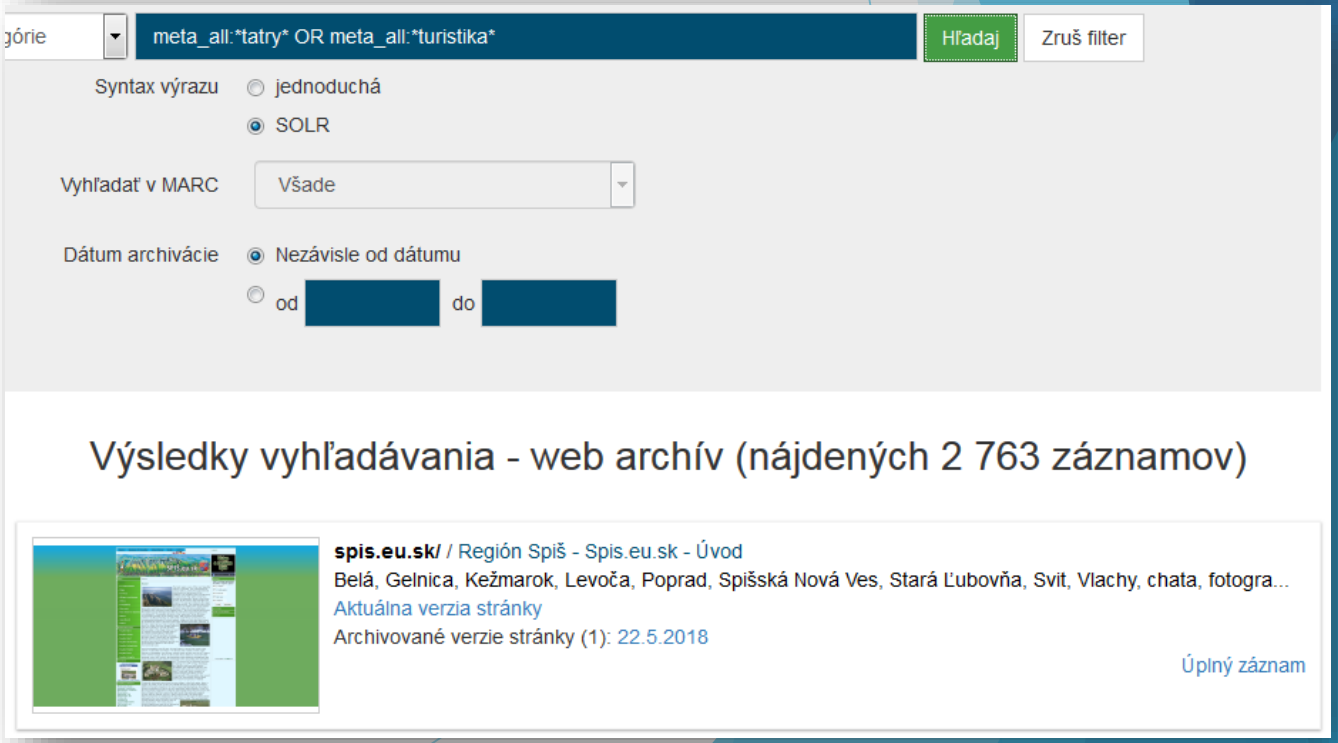


Search of the keyword „ulib.sk“ – links to live site, OW versions, possible export of harvest metadata

ADVANCED SEARCH

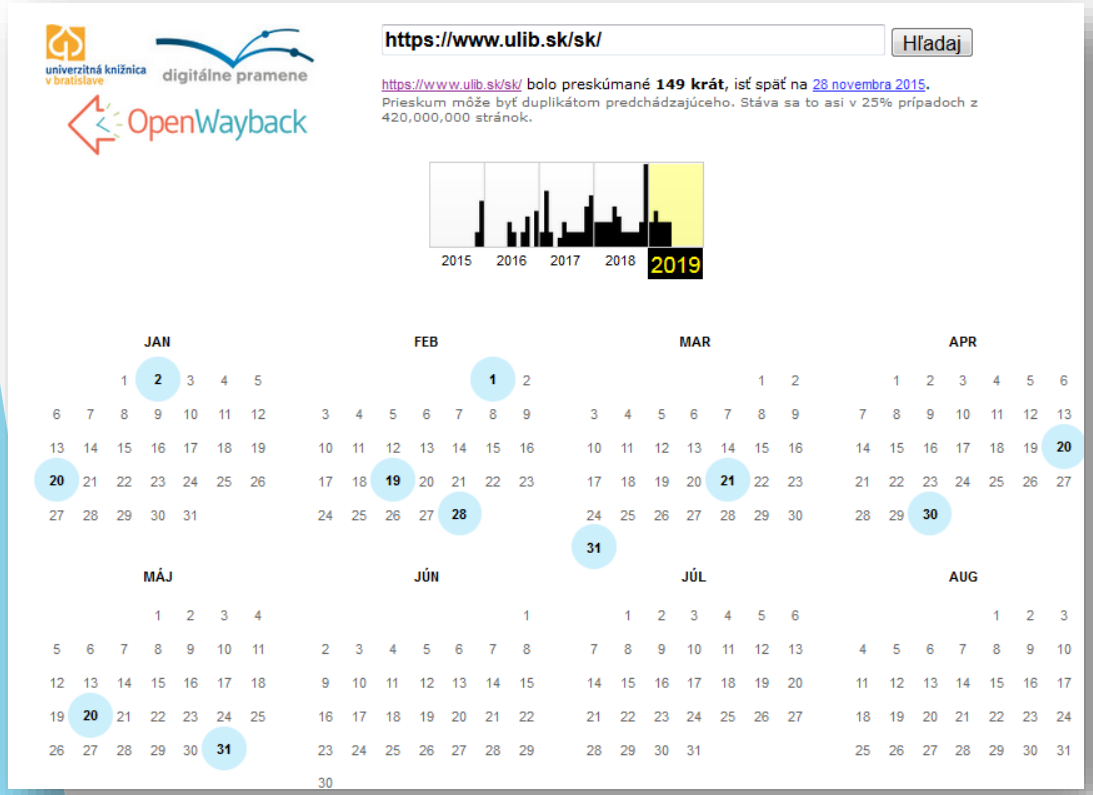
- Basic metadata search by following MARC fields:
  - All metadata
  - Title (24500$a)
  - Keyword (650#4$a)
  - Conspectus category (072#7$x)
  - URL of resource (85640$u)
  - Subtitle (24616$i)
  - Description (500##$a)
- SOLR complex expression search using operators
  - Logical operators:
    - and (AND)
    - or (OR)
    - not (NOT)
- filtering results by date of archiving





OPENWAYBACK

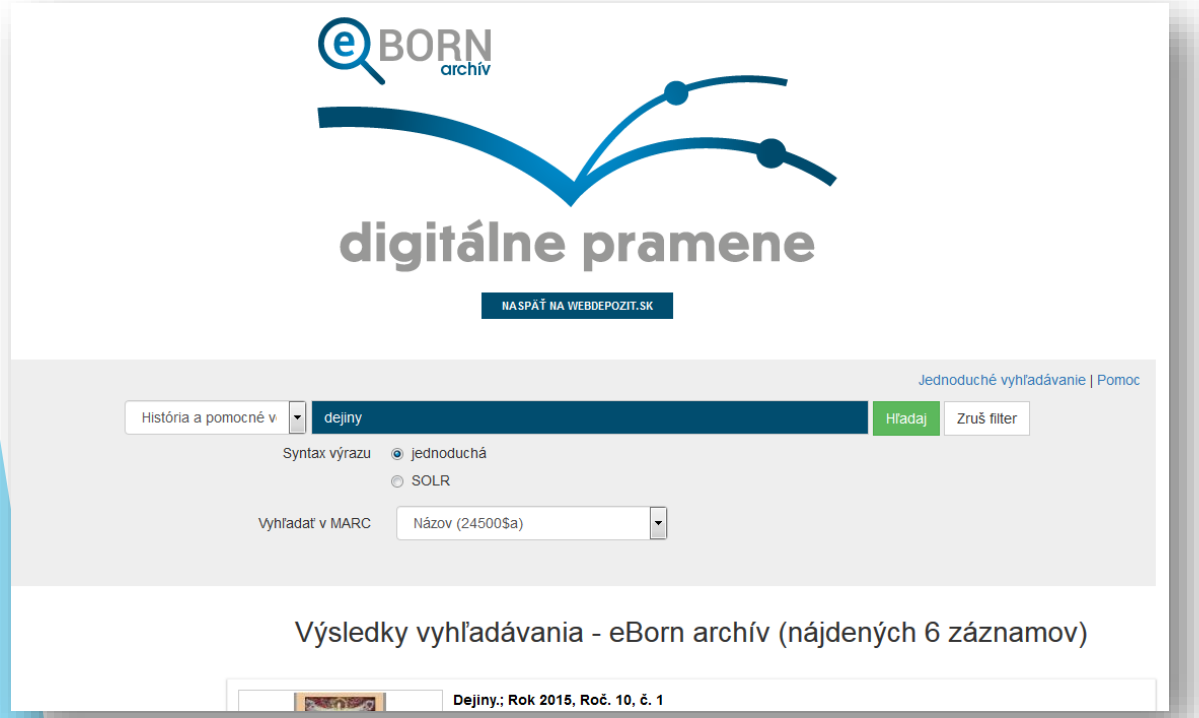
- Results in OpenWayback
- Displaying of the archived website

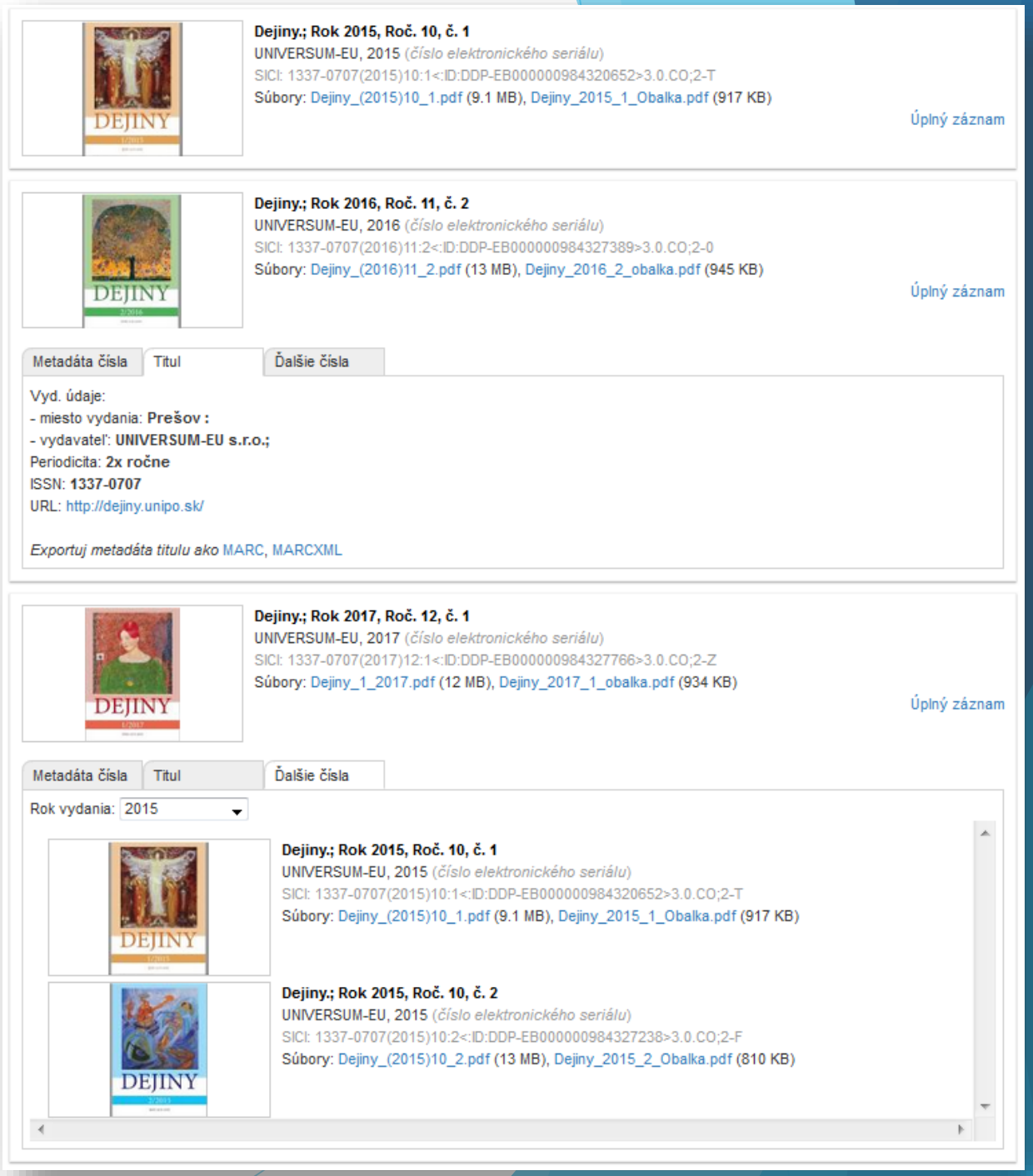


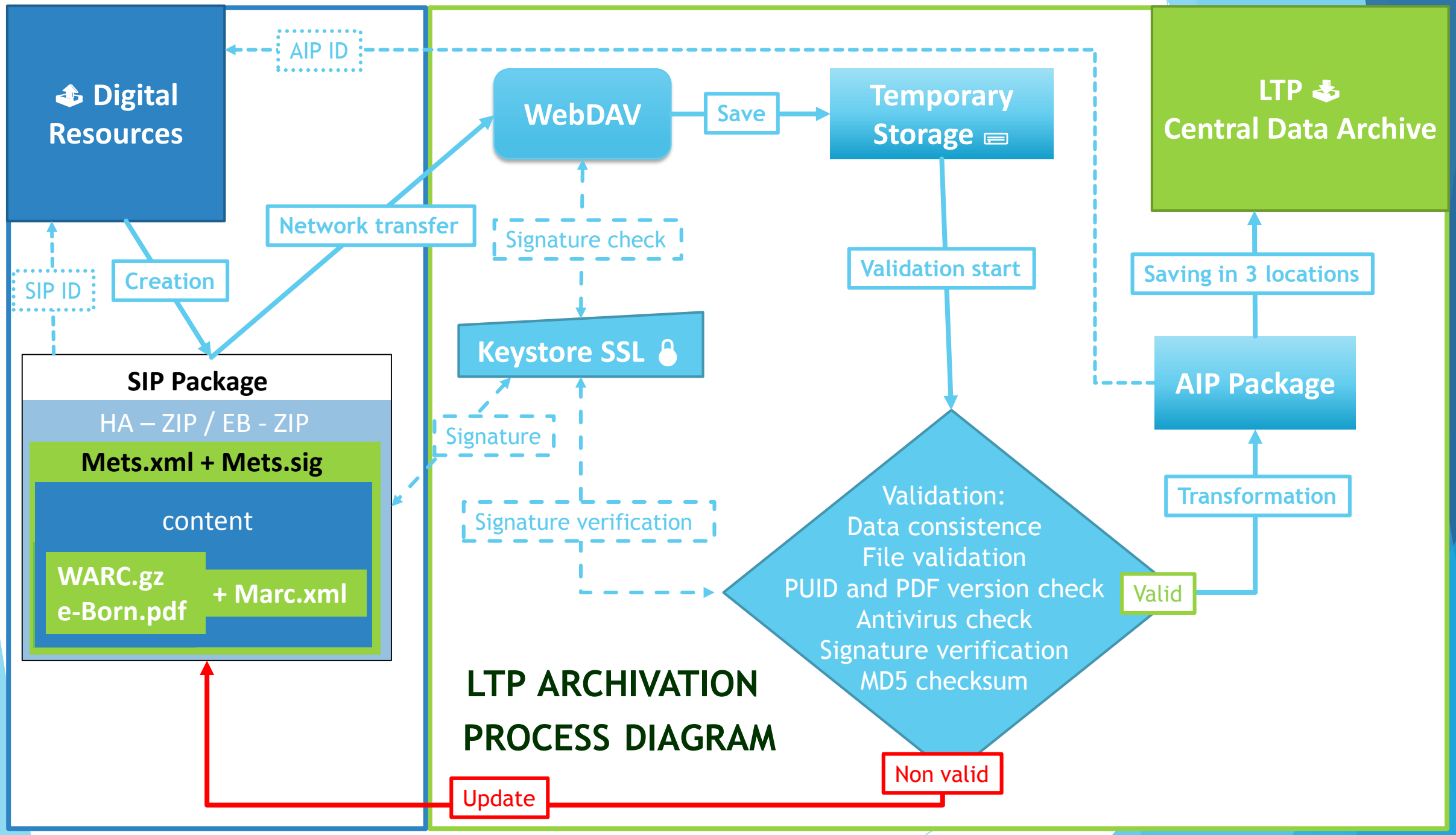
https://search.webdepozit.sk

E-BORN SEARCH

- full-text search
- results of e-Born archive search with title details
- title „Dejiny“






Digital Resources
AIP ID
WebDAV
Save
Temporary Storage
LTP
Central Data Archive
Network transfer
Signature check
Validation start
Saving in 3 locations
SIP ID
Creation
Keystore SSL
AIP Package
SIP Package
HA – ZIP / EB - ZIP
Mets.xml + Mets.sig
content
WARC.gz
e-Born.pdf
+ Marc.xml
Signature
Signature verification
Validation:
Data consistence
File validation
PUID and PDF version check
Antivirus check
Signature verification
MD5 checksum
Valid
Transformation
LTP ARCHIVATION
PROCESS DIAGRAM
Non valid
Update

THANK YOU FOR YOUR ATTENTION

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