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From DigiTool to Aleph and Back Again:

Metadata Synchronization

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Overview

- The Bavarian Library Network: Who we are
- Metadata Synchronization: … What?
- … Why?
- … How?

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The Bavarian Library Network

- Regional library network for Bavaria, Germany
- Head Office is department of Bavarian State Library
- Network Catalog (Aleph 500):

  - cooperative cataloging,
  - copy cataloging from common data pool,
  - authority files (persons, corporate bodies, subject headings)
- Local library systems get bibliographic records autmoatically (Z39.50-based; new records, updates, deletions)

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The Bavarian Library Network

- 2005: Decision for DigiTool as a common repository
- important: connection from catalog to repository (end user navigation; making digitization visible)
- DigiTool installation will be open to all network libraries (reduces administrative overhead)
- since 2006: implementation, pilot projects with Bavarian State Library (project for long-term preservation of digital objects) and University Library Regensburg

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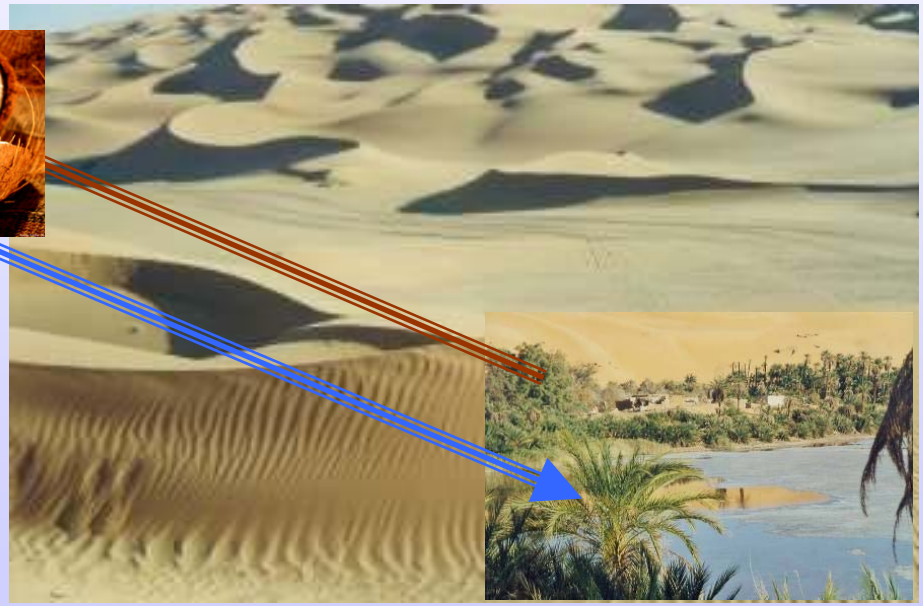
What?

Aleph

DigiTool (from a cataloger‘s point of view)



(Images from Wikipedia)

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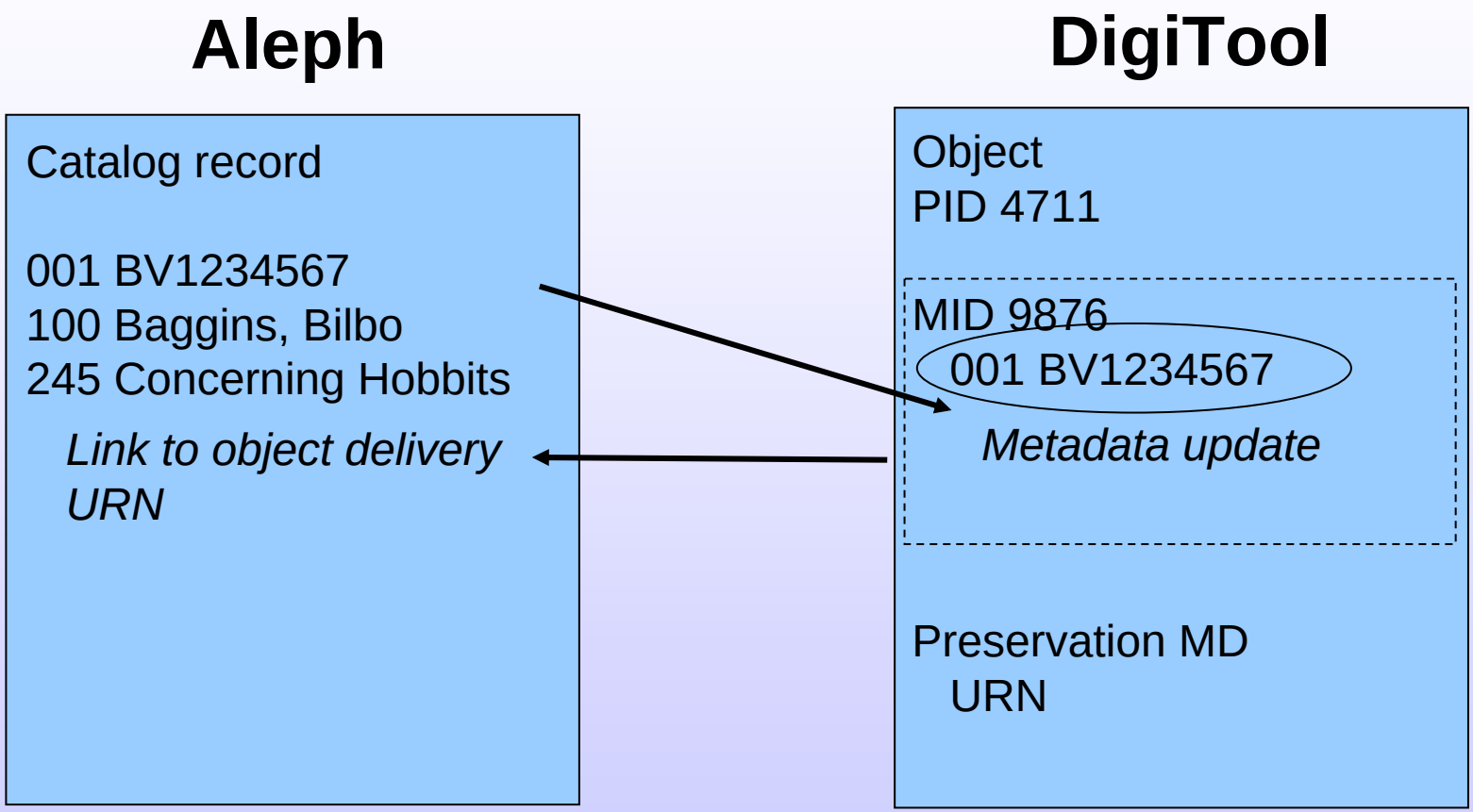
What? (slightly more technical)



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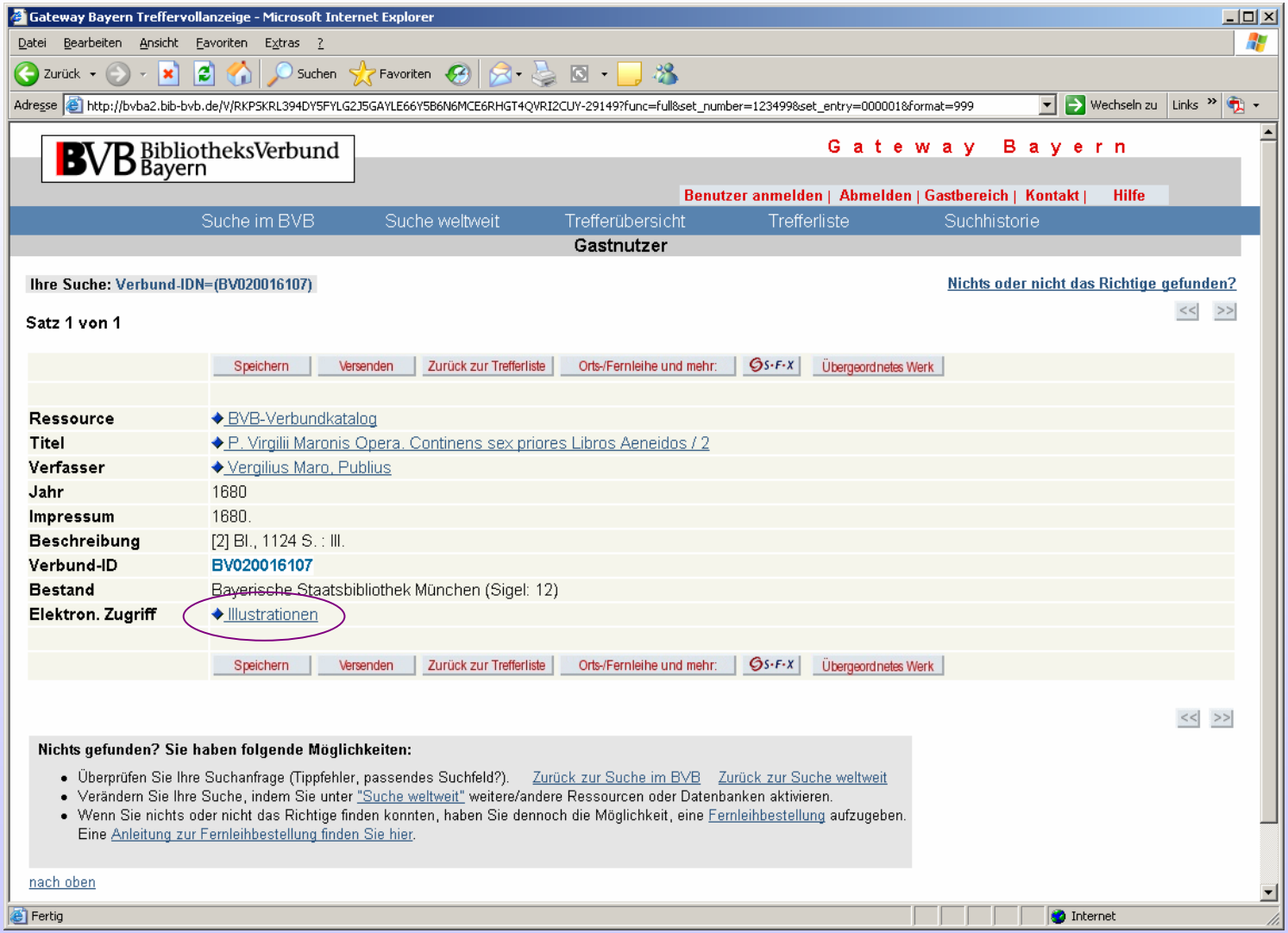
What?
End user perspective



Illustrationen - Microsoft Internet Explorer

BSB Bayerische StaatsBibliothek

Continens sex priores Libros Aeneidos

1680_BSB_A.lat.a. 2179-2_288_289
1680_BSB_A.lat.a. 2179-2_480_481
1680_BSB_A.lat.a. 2179-2_640_641
1680_BSB_A.lat.a. 2179-2_792_793
1680_BSB_A.lat.a. 2179-2_930_931
1680_BSB_A.lat.a. 2179-2_TITEL
1680_BSB_A.lat.a. 2179-2_VOR 1_1

1680_BSB_A.lat.a. 2179-2_288_289

P. VIRGILII MARONIS ÆNEIDOS LIBER SECUNDUS.

ARGUMENTUM.

Didonis voluntati morem gerens Æneas, excidii Trojani seriem narrat, ea est hujusmodi: Græci decimo belli Trojani anno, attritis jam viribus, virtutique diffidentes, ad dolum confugiunt, noctesque ea, quæ urbis incendium antecessit, fugam simulantes, circa Tenedum latitant, relicto in agro Trojano equo ligneo tantæ magnitudinis, ut portis urbis recipi non posset: ejus utero lectissimum quemque procerum includunt. Trojani partim fraude Sinonis impulsi, partim Laocoontis supplicio territi, diruta muri parte, equum in arce statuunt. Nocte intempesta Græci à Tenedo profecti, per eam muri ruinam, qua equus erat introductus, urbem invadunt. Sinon reserato equi utero armatos emittit: omnia ferro flammisque fœdantur. Æneas interim ab Hectore in somnis admonetur, ut sibi fuga consulat, deosque patrios incendio eripiat. Ille tamen honestam mortem turpi fugæ præferens, frustra in arma ruit: satis feliciter primus impetus succedit Trojanis, donec Chorœbi consilium sequuti, sumptis Græcorum armis, suorum telis obruuntur. Interea Priami regia oppugnatur, Priamusque ipse à Pyrrho, Achillis filio, interficitur. Æneas itaque, frustra tentatis omnibus, cum jam nihil spei reliquum esset, sacra Anchisæ patri committit, eoque in humeros suos sublato, assumptisque Ascanio filio Creusaque uxore, fugam arripit. Græci à tergo insequuntur. In eo tumultu Creusam uxorem amittit: cujus quærendæ caussa, per totam urbem oberranti, obvia sit uxoris umbra, virumque mortis suæ certiorem facit: ipse ad socios revertitur, quo jam magnus virorum mulierumque numerus confluxerat, ejus auspicium, quocunque terrarum abducere vellet, sequi paratus.

Conticuere omnes, intentique ora tenebant:
Inde toro pater Æneas sic orsus ab alto:

Infan-

1. Conticuere omnes.] Quia supra dixit, *Fit strepitus tectis. Conticuere* autem, pro *conticuerunt*: metri caussa, vel ratione clausularum. Nec est, ut quidam dicunt, dualis numerus: qui apud Latinos nunquam penitus invenitur. Et bene *omnes* addidit. Poterant enim simul quidam, sed non omnes, tacere. *Servius.*

Conticuere.] Quia dixerat: *Fit strepitus tectis*: &, *cythara crinitus Iopas Personat aurata.* &, *ingeminant plausu Tyrii.* Conticuere partim, propter ejus honorificentiam: partim, quia mens hominum cupida est audiendi novas res, & regina indixerat silentium. *Donat.*

Conticuere omnes.] Hoc libro Poëta secutus videtur Hom. Od. *ν.* quo à cœna Ilysses errores suos Aretæ narrat Alcinoi uxori. *Germanus.*

Conticuere.] Hic *Liber*, qui ἅλωσιν *Ilii* describit, ex iis est, qui præcipuam palmam meteri judicati, atque ipsi *Augusto* à Poëta recitati sunt. narratque Agellius, l. 2. c. 3. hunc librum viginti aureis emptum esse. Cæterum dicendi genera, quos χαρακτῆρας Græci vocant, cum tria sint probabilia; *Uber*, sive generosum: *Gracile*, sive Subtile; & *Medium*, sive Mediocre; hic Liber in *Summo genere* scriptus est. Refertur autem ad locum communem, quo omnes

Fertig

Vertrauenswürdige Sites

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Why?

- using existing bibliographic records = saving of labor (→ digitization projects)
- Aleph is and will at least for some time stay the primary cataloging environment (authority files). If „low quality“ is sufficient, it is also possible to have metadata only in DigiTool.
- updates of bib. records are replicated to DigiTool
- Access to digital objects from the catalog (on multiple levels: network / library / worldwide)

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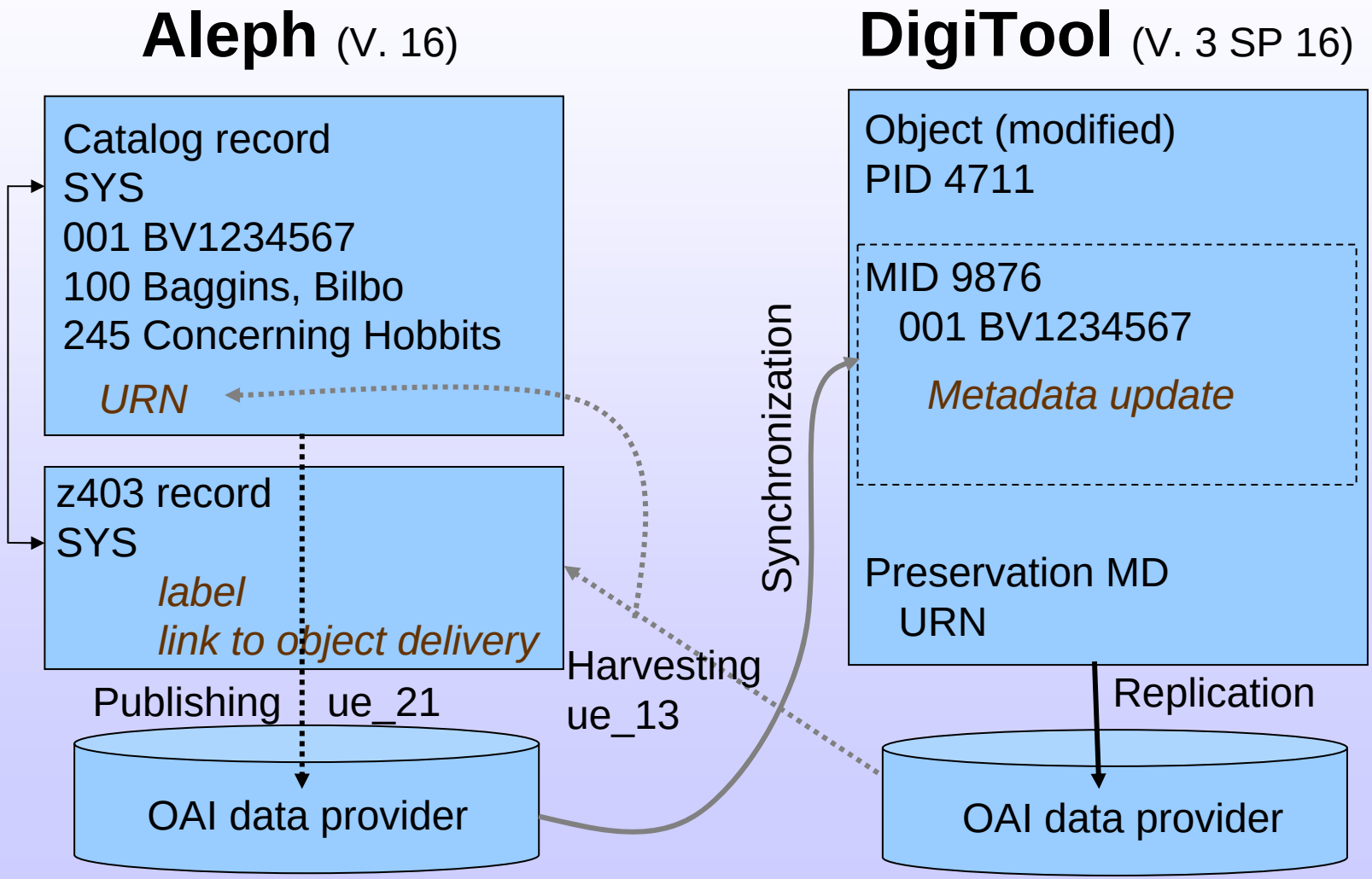
How? (even more technical)



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Terminology

	DigiTool	Aleph
Updating OAI data provider (Repository)	Replication	Publishing ue_21
OAI service provider	Synchronization	Harvesting ue_13

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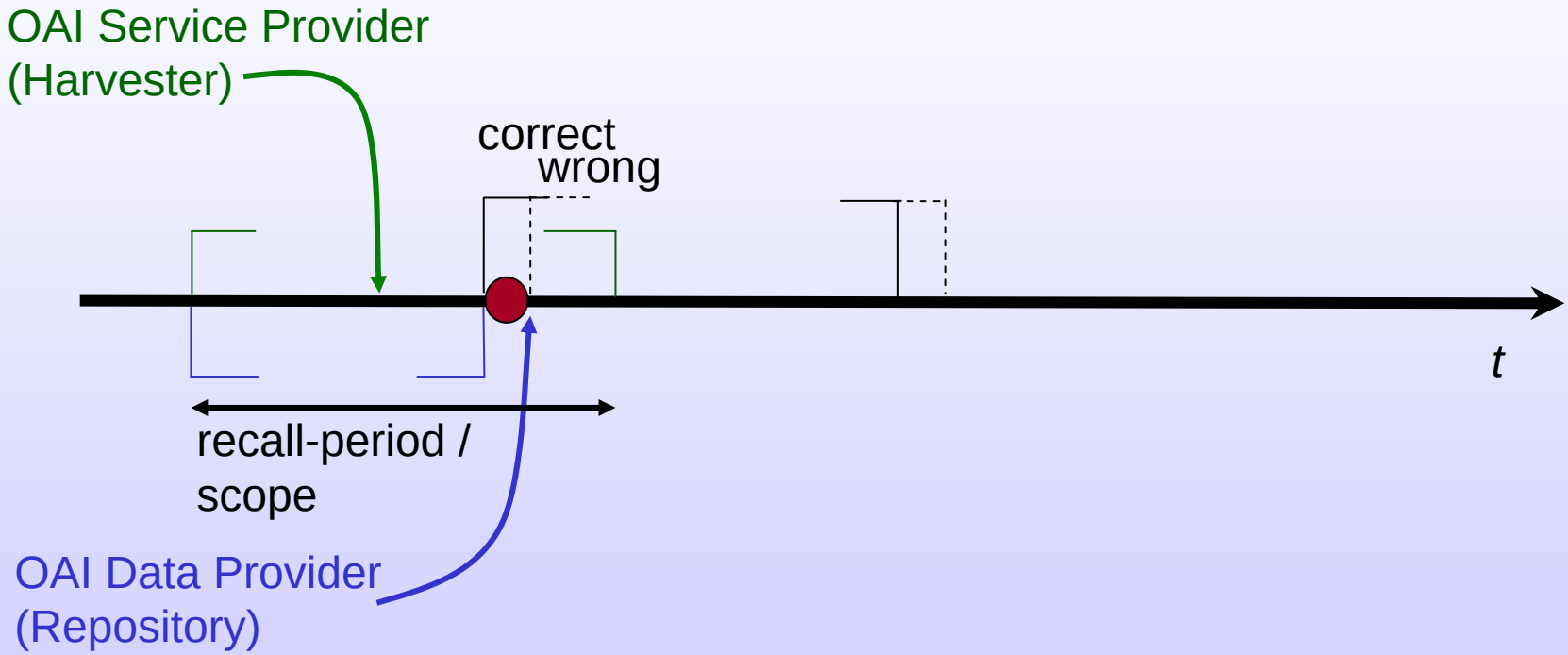
tempus fugit



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Configuration experience 1

Aleph side:

- recall-period 20 minutes, wait time 10 minutes (applies when the last request produced no results – otherwise next request immediately → adaptive harvesting strategy)
- after error situation: recall-period 90 minutes, wait time 10 sec. („catch-up“)

Important: choose recall-period > wait time (to avoid degeneration)

- Publishing is triggered by indexing process – otherwise constraints for publishing can‘t be evaluated!

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Configuration experience 2

DigiTool side:

- Synchronization: every 10 minutes (not adaptive), recall-period 4 hours (relic, but still works)
  This interval mustn‘t be too short, otherwise the former synchronization process may not have finished
- Replication: every 10 minutes
- change of parameters → jboss restart!

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Exciting things 1

1. Deleting an object in DigiTool
   - deletion is communicated to Aleph
   - z403 record is deleted
   - *but* URN remains in bib. record
2. Changing the label in DigiTool
   - is communicated to, but *not processed* by Aleph
   - Aleph-Fix announced

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Exciting things 2

3. Linking 1 bib. record with a second object
   - when Aleph is going to publish the bib. record, it may note that there was no change to it (new link is no part of publishing format) and ignore it
   - Aleph-Fix announced
   - Recommendation: use shared MD record in DT
4. Linking 1 object with 2 bib. records
   - not possible due to uniqueness of PID in Aleph index z403_id1 (which avoids infinite DTL-Aleph-Sync loop...)
   - whenever you want to do such a thing: rethink your data model...

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Exciting things 3

5. correcting wrong 001 number in DT
   - Metadata update may succeed (cf. 3.)
   - Aleph notes that there is already a z403 record for this PID and is satisfied...
   - ...but you are probably not. You can
   -- remove „wrong“ z403 record (ADAM-enabled version of Aleph GUI client) before correction
   -- delete and recreate object in DT

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Frustrating things

1. When you have digital objects like tables of contents, reviews, errata etc. which can be used to enrich the catalog
- you want to have a link from the bib. record
- *but* when these objects have an URN in DigiTool, it is transported into the bib. record → this should only happen for „full“ representations of an item
- DigiTool stores URN with no relation to MD records
- so the short-term “solution“ is: no URNs (:-[)

2. It has been quite a long quest: implementation, test, frustration, re-implementation... but now it works for most scenarios (:-})

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Thank you very much for your attention!
The road goes ever on and on…
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