Towards Digital Matematics Library: from DML-CZ to EuDML

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FI MU, NLP seminar, April 28th, 2010

EuDML

The EUROPEAN DIGITAL MATHEMATICS LIBRARY

Vision of WDML/EuDML

At the beginning there was a vision of all mathematical knowledge, *peer reviewed and verified* (100 000 000 pages) on one spot and in the digital form.

It starts to happen, but slowly: three year EU projekt EuDML (programme EU CIP-ICT-PSP, type Pilot B) from February 2010 (MU and MU AV).

As a basis serve current DML repositories as DML-CZ or NUMDAM (bottom-up build up).

Example of DML-CZ: up and running digital mathematic library with nearly 30,000 papers. For more, see (who, what, browse, browse similar, how to search).

All comments to DML-CZ welcome!

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DML-CZ – data: scientific math published in Czech and Slovak

Proof. Let $\hat{K}$ be a cube, $\hat{K} \subset \hat{G}$; put $K = \varphi^{-1}(\hat{K})$. According to theorem 50 we have $K \in \mathfrak{A}$ and it follows from theorem 24 that

$$P(K, v) = \int_K f(x)\,\mathrm{d}x\,. \tag{89}$$

The functional determinant T of the mapping $\psi = \varphi^{-1}$ fulfils the relation $T(\varphi(x))\,.\,\det M(x) = 1$, so that

$$\int_K f(x)\,\mathrm{d}x = \int_{\hat{K}} f(\psi(y))\,.\,|T(y)|\,\mathrm{d}y = \int_{\hat{K}} \hat{f}(y)\,\mathrm{d}y\,. \tag{90}$$

From theorem 50 (and relation (86)) we see that $P(K, v) = P(\hat{K}, \hat{v})$; relations (89), (90) show therefore that $P(\hat{K}, \hat{v}) = \int_{\hat{K}} \hat{f}(y)\,\mathrm{d}y$, which completes the proof.

Remark. The reader may compare this paper with [6].

REFERENCES

[1] *V. Jarník:* Diferenciální počet, Praha 1953.
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Резюме

ПОВЕРХНОСТНЫЙ ИНТЕГРАЛ

ЯН МАРЖИК (Jan Mařík), Прага.

(Поступило в редакцию 10/X 1955 г.)

Пусть m — натуральное число; пусть E_m — m-мерное евклидово пространство. Для всякого ограниченного измеримого множества $A \subset E_m$ положим $\|A\| = \sup \int_A \sum_{i=1}^{m} \frac{\partial v_i(x)}{\partial x_i}\,\mathrm{d}x$, где $v_1, \ldots, v_m$ — многочлены такие, что $\sum_{i=1}^{m} v_i^2(x) \leqq 1$ для всех $x \in A$. Пусть $\mathfrak{A}$ — система всех ограниченных измеримых множеств A, для которых $\|A\| < \infty$. Теорема 18 тогда утверждает: *Пусть $A \in \mathfrak{A}$; пусть D — граница множества A. Тогда на системе $\mathfrak{B}$ всех борелевских подмножеств множества D существует мера p и на*

ИОСИФ ВИССАРИОНОВИЧ СТАЛИН

1879—1953

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1879—1953

EuDML as a virtual library portal

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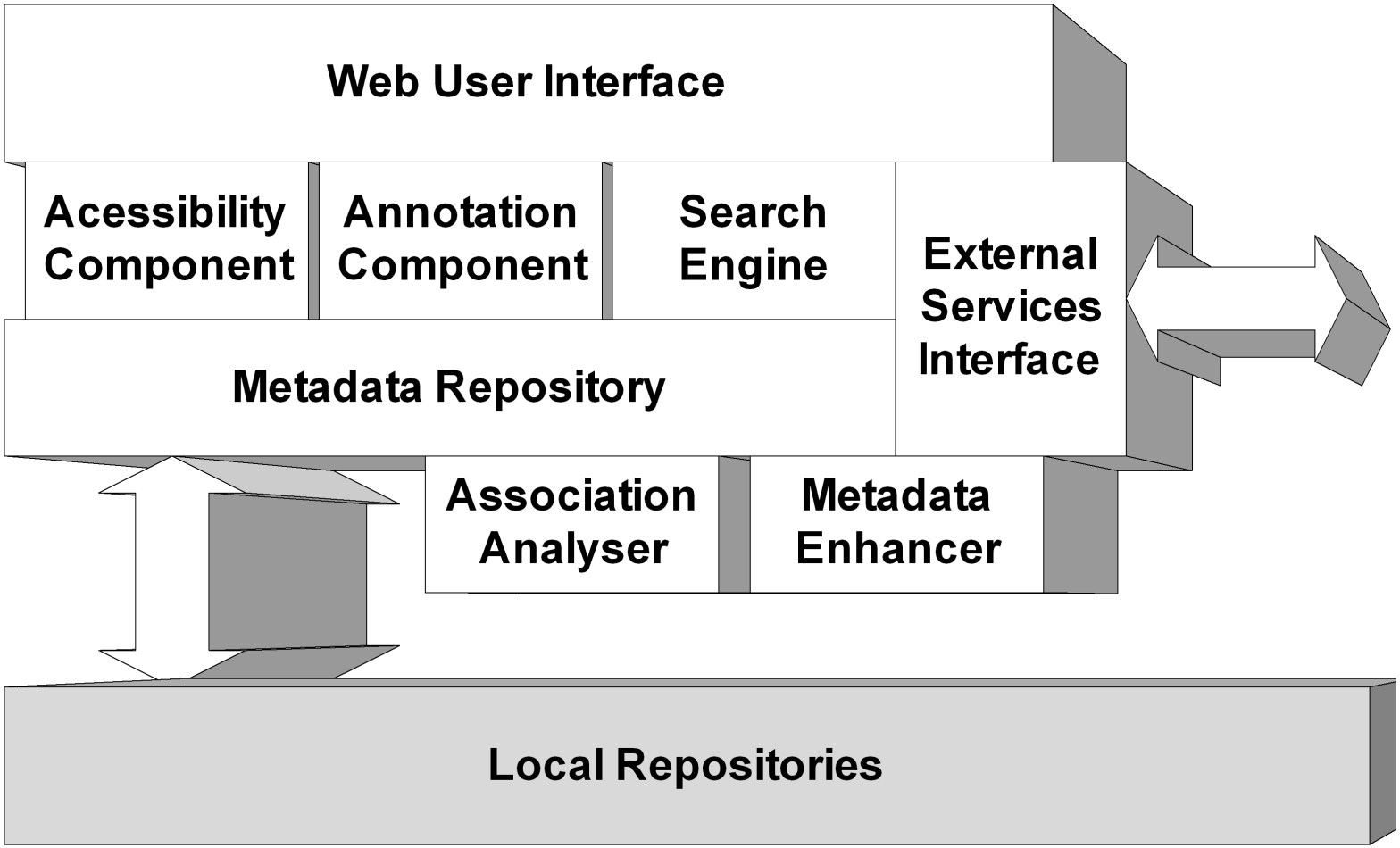

EuDML – data: legacy scientific math

- By 2013, EuDML should integrate *12 repositories*, have content from *200 integrated collections* (journals, book series, conference proceedings,…), more than *160,000 digital items* (papers, book chapters), *500,000 links between database objects*.
- It should be ‘live’ DL, having more than *1,000 users* contributing annotations, and more than *10,000 annotation* by 2013.
- Concept of *moving wall*: legacy data even from commercial publishers.

But how to actually implement it?

Experience from iproject partners from current digital library development.

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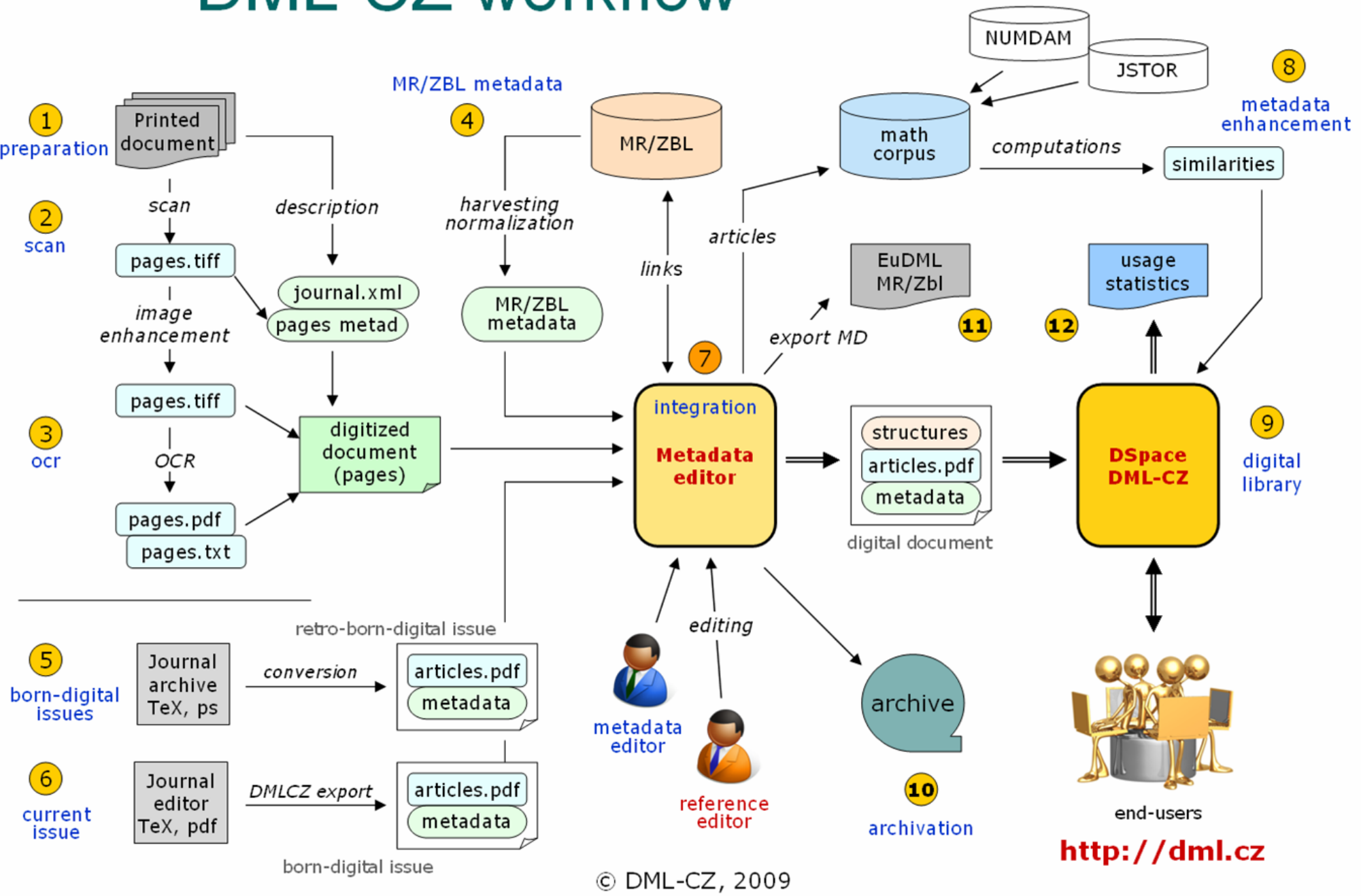
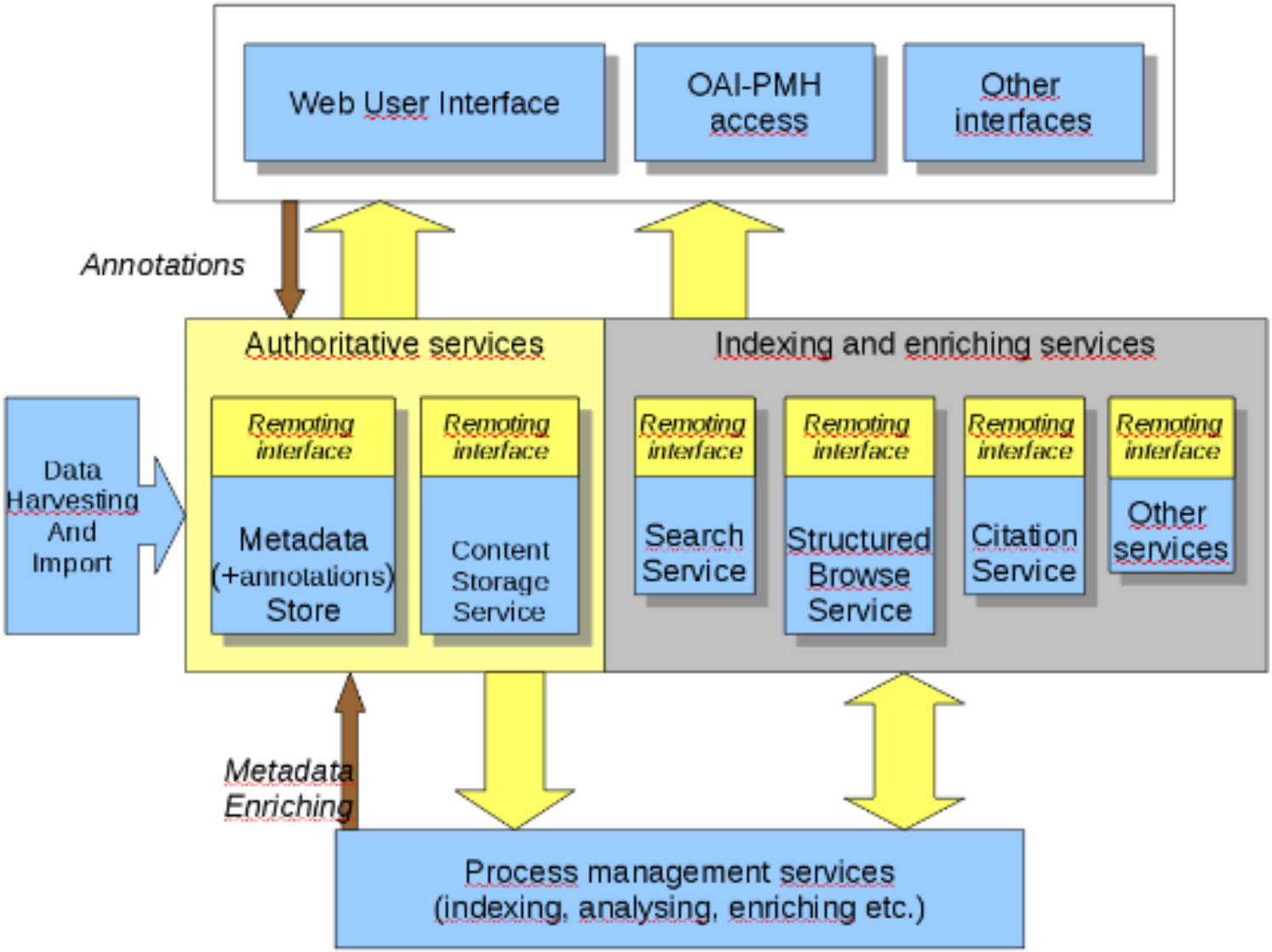
Take care!

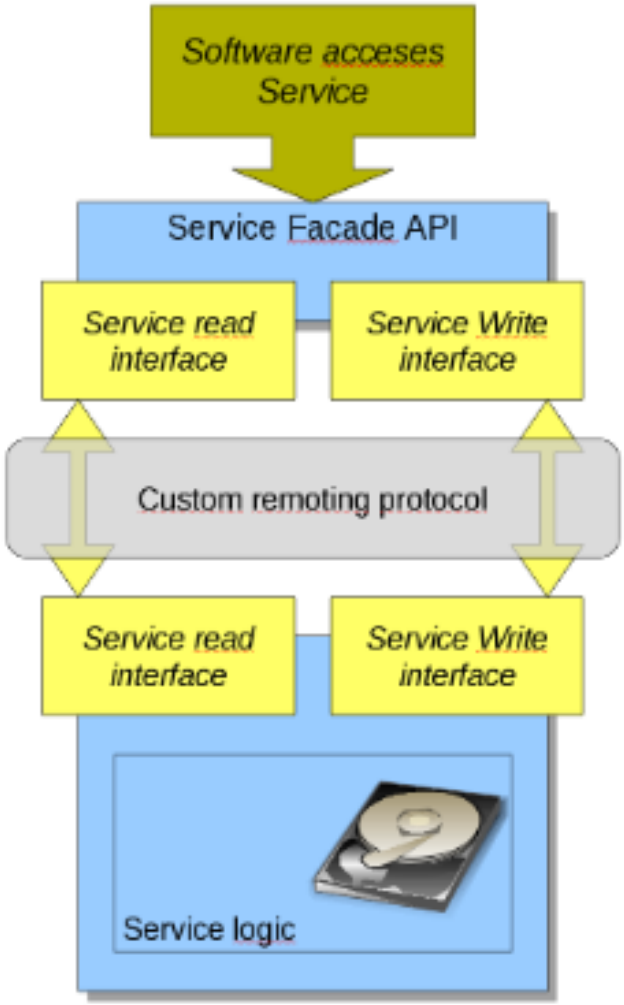
DML-CZ workflow



EuDML service based architecture



EuDML service based architecture II



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math specifics needed to develop (TEX to MathML converter, math OCR, math in metadata support,…

MU offers: Metadata editor and other tools and expertize, mainly to be used in *WP7 Metadata Enhancements*

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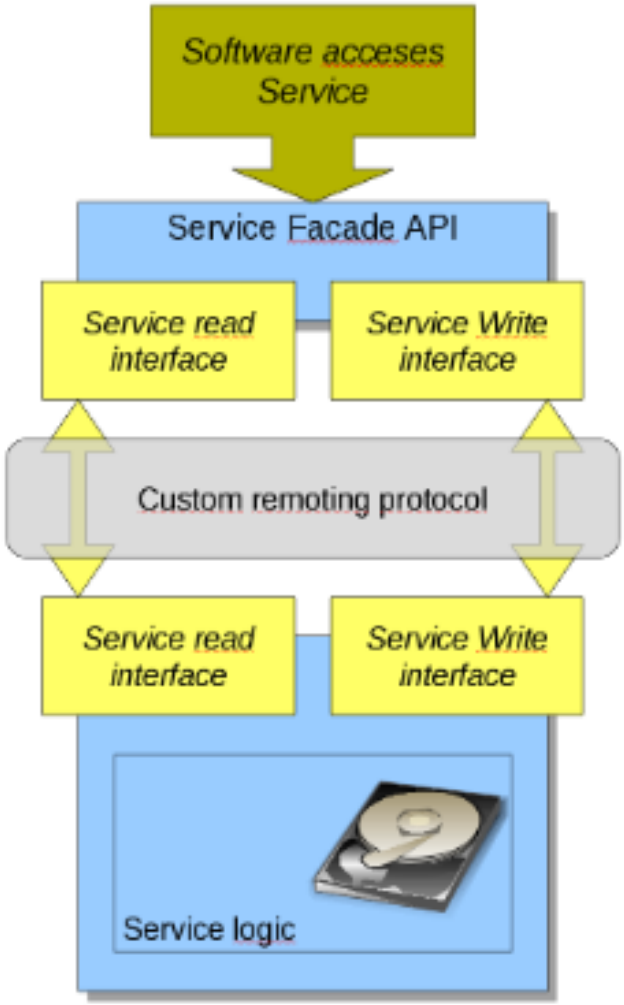

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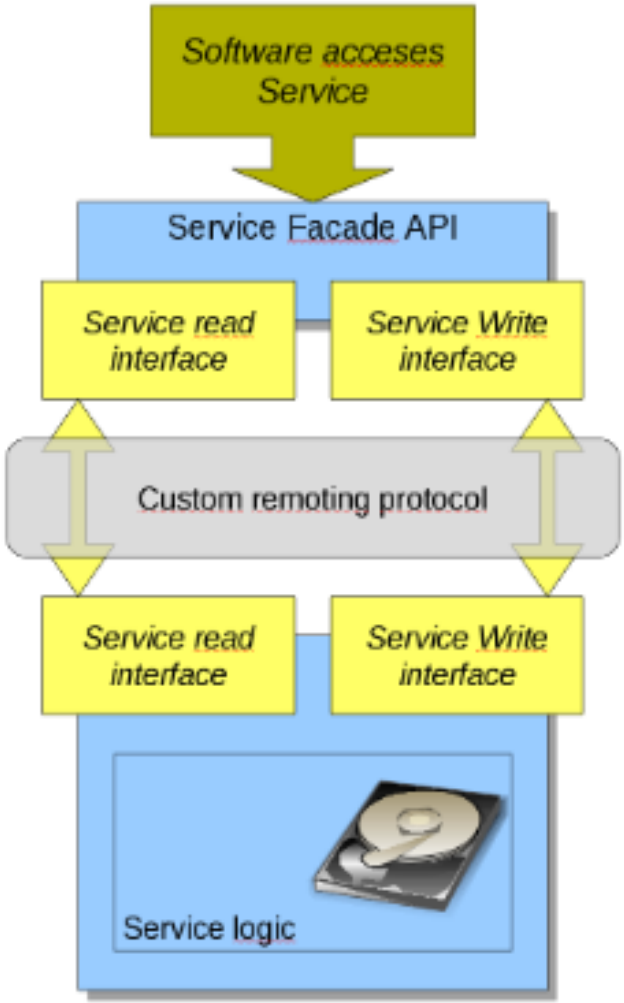

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retro-digital period: scanning, geometrical transformations (BookRestorer), OCR (FineReader, InftyReader), two-layer PDF

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Summary

EuDML: work in progress, based on DML-CZ experience and tools developed at FI and ICS during last 6 years.

Current activities: WP4&5 meeting in Warsaw, 4+ papers for forthcoming DML 2010 workshop (deadline today ;-), accepted paper at LREC 2010 (with Radim Řehůřek)…

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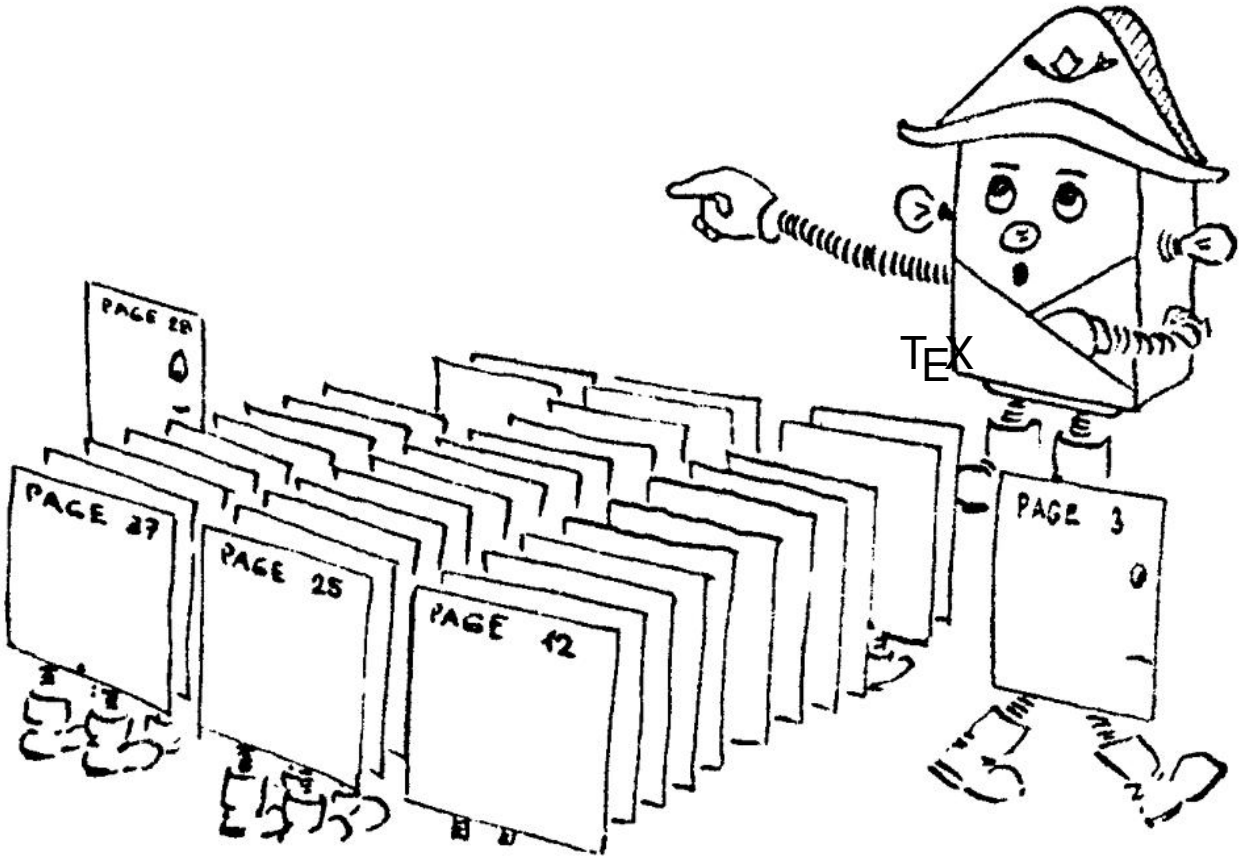

Questions? Otherwise other 5 talks to follow.

References, links

DML-CZ team.
Materials about DML-CZ, project publications [online, cit. 2010-04-28].
<http://project.dml.cz/documents.html>.

EuDML team.
EuDML project info [online, cit. 2010-04-28].
<http://ec.europa.eu/information_society/apps/projects/factsheet/index.cfm?project_ref=250503>.

EuDML team.
EuDML preliminary webpage [online, cit. 2010-04-28].
<http://eudml.devspace.net/>.

EuDML at MU team.
EuDML at MU project info [online, cit. 2010-04-28].
<http://nlp.fi.muni.cz/projekty/eudml/> or <http://www.muni.cz/research/projects/10067>.