Leveraging Passive Paper Piles to Active Objects in Personal Knowledge Spaces
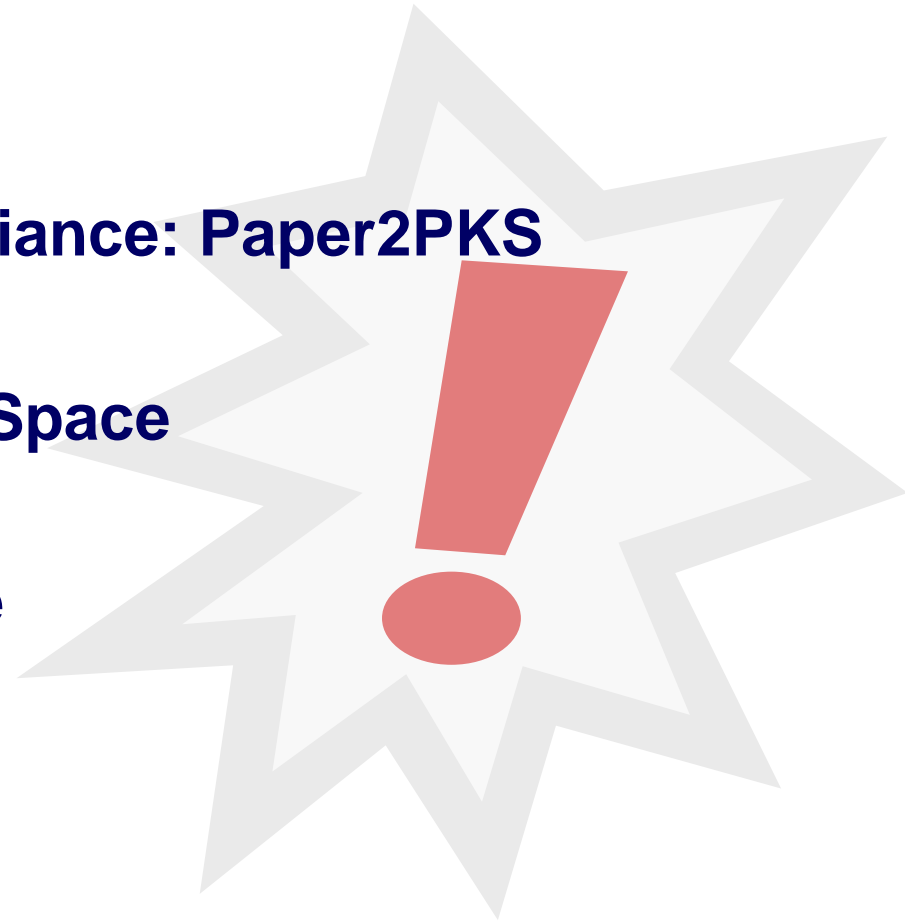
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AGENDA

► **Motivation**

► **Intelligent Office Appliance: Paper2PKS**

► **Personal Knowledge Space**

► **User-adaptive Service**

► **Conclusion**

What do we mean with "Passive Paper Piles"?

MOTIVATION

Some impressions ...

Some Reasons for these Piles

► Arise out of the "hunter-gatherer" mentality of today's knowledge workers

– Could be relevant – at some time

– Interesting, I have to read it !   ... but not now

► Piles have a meaning & act as visible reminders

– Topics, tasks, ToDos

– Or simply places for everything relevant

What problems do arise in everyday office work?

► Information is "hidden" on paper documents

- and documents are hidden in piles
- Papers tend to be forgotten
- Piles are getting higher…content won't ever be touched again

► Awareness of relevance when needed is not assured
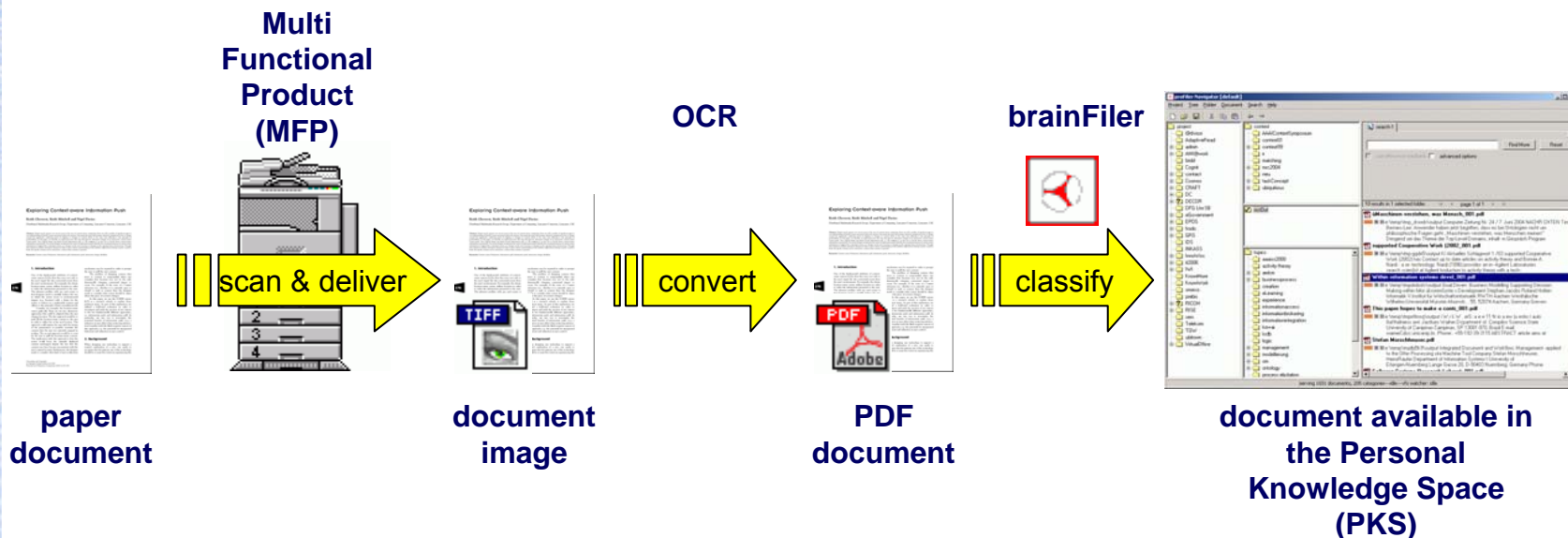
- e.g., during search or task execution

Problems of a paper world …

Scanning technology is available in offices, so what?

► Transferring paper to the electronic world is for an office worker not as easy as it should be

– Too many manual steps

► It requires time & discipline to organize documents

– These are already the reasons for the paper piles

– Where to store the documents to ensure later retrieval?

• There will be electronic "piles"

Requires an easy to use and minimal distractive solution

MOTIVATION

Paper2PKS: A first step towards vanishing paper piles

Multi Functional Product (MFP)

OCR

brainFiler

paper document → scan & deliver → document image → convert → PDF document → classify → document available in the Personal Knowledge Space (PKS)

▶ Combination of state-of-the-art office technologies

– MFP (Copy/Scan/Store/Print/Fax) & delivery infrastructure

– OCR producing PDF with TruePage layout & accessible text

– Personalized document repository with indexing & classification functionality

Leveraged paper piles: Document search

Where does the "intelligence" come from?

Leveraging electronic footprints from user's desktop to a Personal Knowledge Space
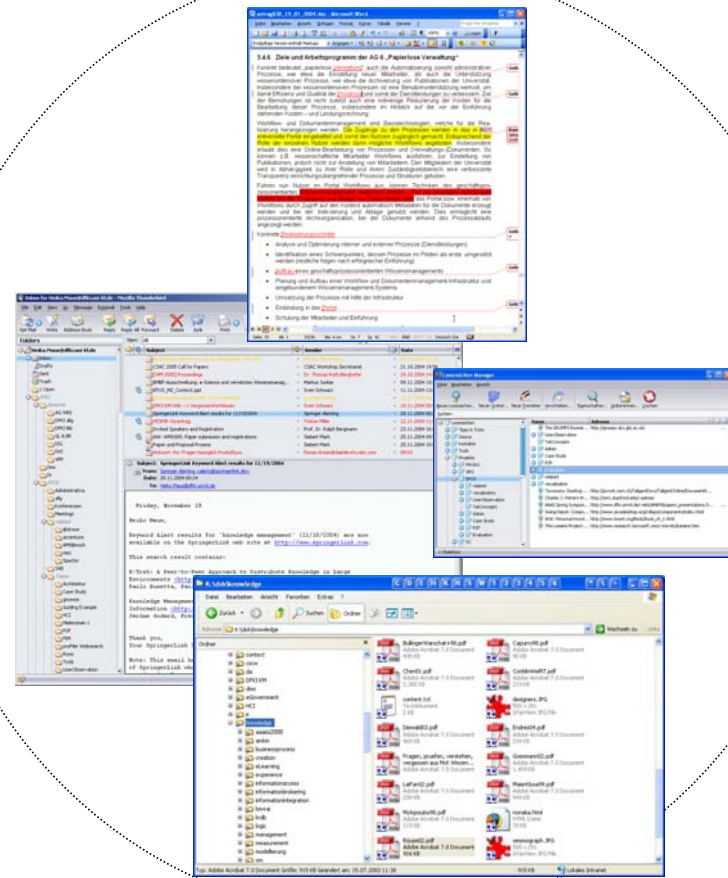
PERSONAL KNOWLEDGE SPACE

User-adaptive services

Personal Information Model

Personal Knowledge Space

native structures information objects user interaction

Leveraging electronic footprints from user's desktop to a Personal Knowledge Space
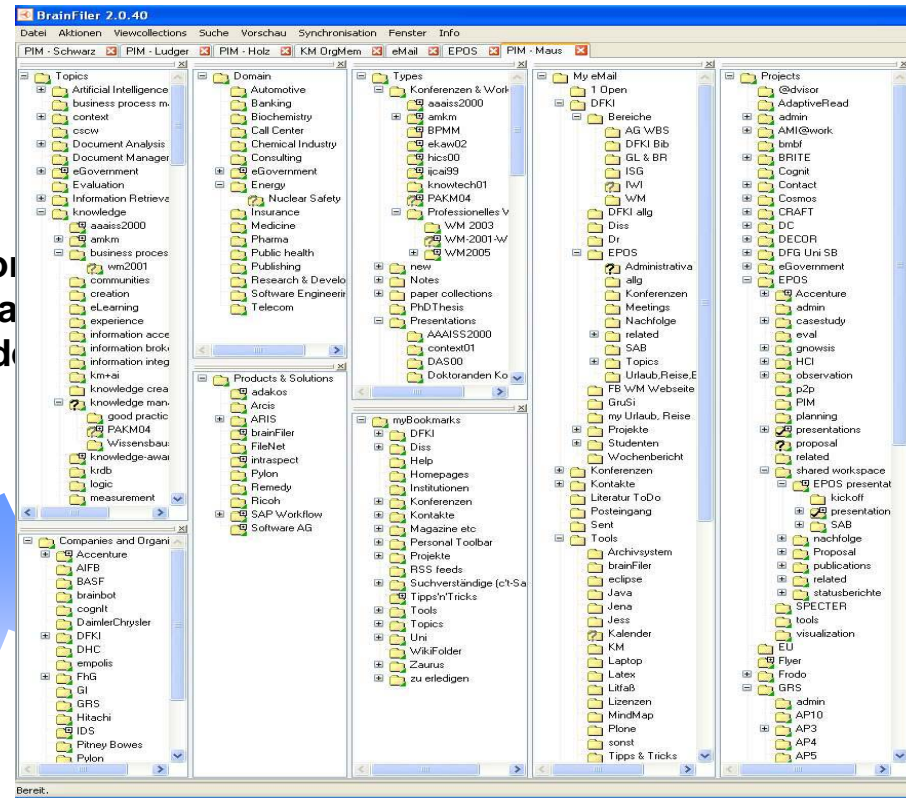
PERSONAL KNOWLEDGE SPACE

User-adaptive services

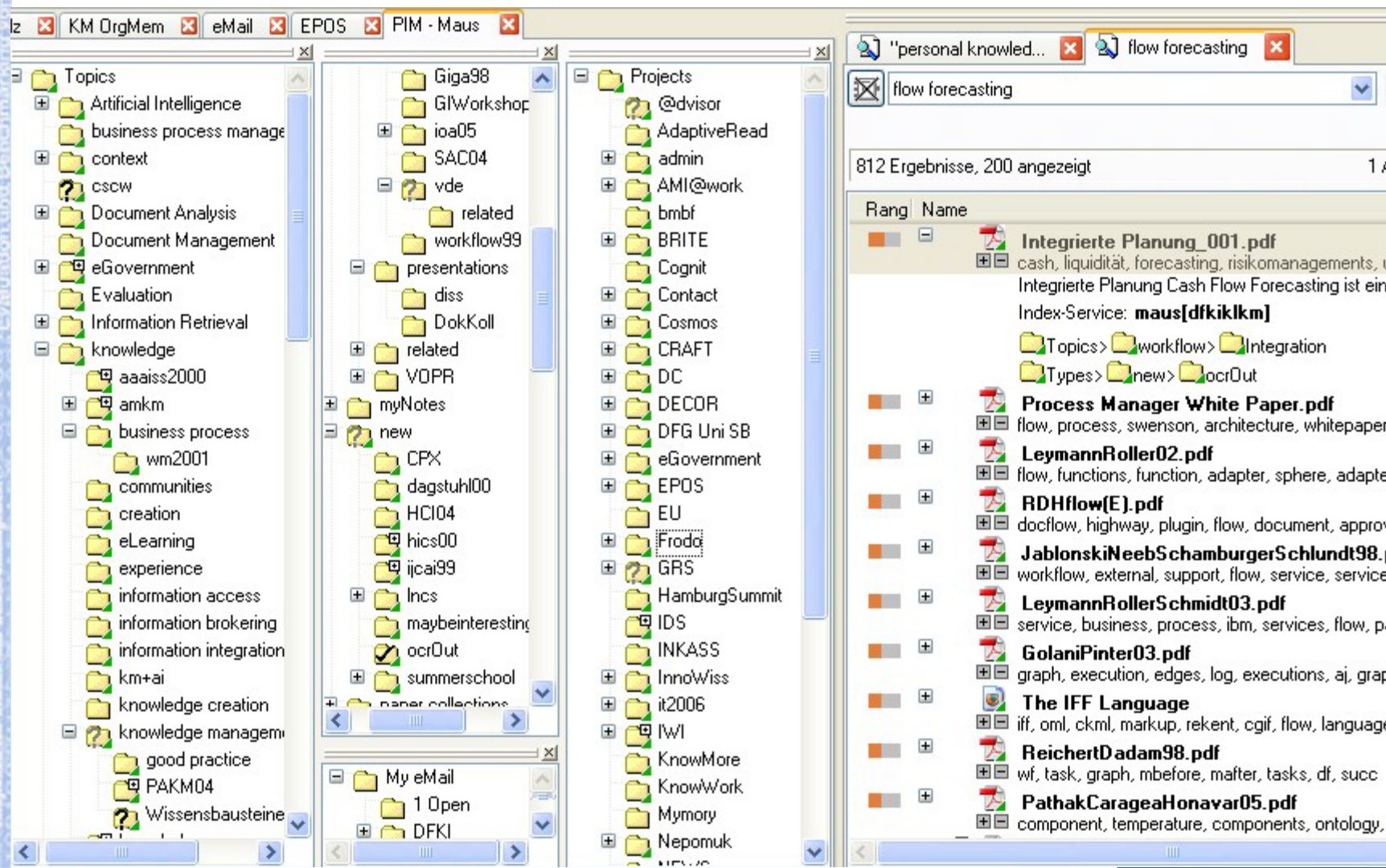**Personal Knowledge Space**

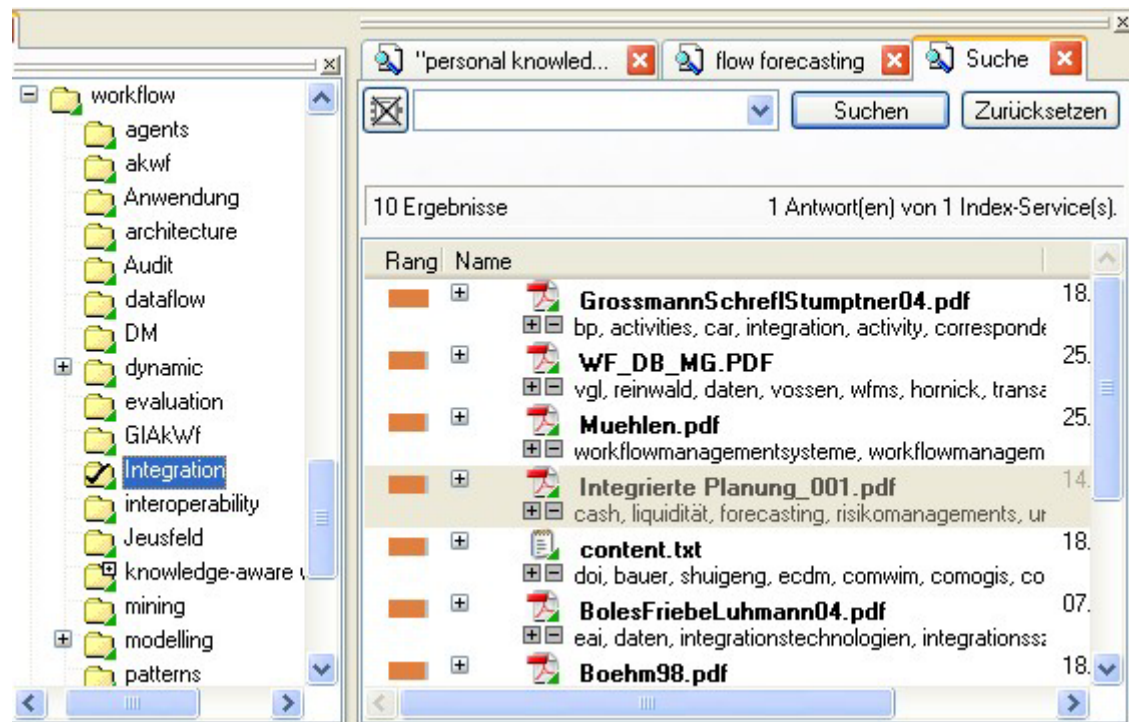Person... Informa... Mod...

native structures
information objects
user interaction

Personal Information Model allows to classify documents according to the user's subjective view

PERSONAL KNOWLEDGE SPACE

► Browse topic "Integration":

How do we achieve "active" objects?

PERSONAL KNOWLEDGE SPACE

Task-specific, proactive document delivery for knowledge work

► Knowledge-intensive tasks require information from various sources
  – such as email, web, file system, document repositories
  – *and* the knowledge worker's paper piles

► Embedding a workflow system enables information support from the Personal Knowledge Space
  – The workflow system reminds user of relevant documents
  – Users can easily attach relevant documents to tasks or workflows

Why „Appliance"?

▶ Important requirements for an appliance:
  – Ease of use
  – Minimal disturbing
  – Direct benefit

▶ IOA Paper2PKS allows "scan & don't care now"
  – "Intelligence" by utilizing the Personal Knowledge Space as well as workflow context

▶ Former paper piles are now active objects in the Personal Knowledge Space
  – Paper documents are stored in a personalized document repository
  – Accessible via search & browse categories
  – Embedded in everyday work of a knowledge worker
  – Documents are proposed if relevant for a task

Links

► EPOS – Evolving Personal to Organizational Knowledge Spaces

- http://www.dfki.de/epos

► FRODO TaskMan – Weakly-structured Workflow

- http://www.dfki.de/frodo/taskman

► Virtual Office of the Future

- http://www.ricoh.rlp-labs.de/