

ergo
doc

Analysing activity traces in order to assess digital resources.

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PLAN

- Issue of assess
- Definitions
- Presentation of the methodology
- Conclusion

To assess digital resources

- Analysis of datas from system logs (*web log analysis*)
- Informations from **server-side**
- Advantage of **quantitative** data processing [Boudroux 08]
- Problem of **standardization** of analysis [Boukacem 05]

Analysing activity retrieval

- Studies about uses of electronic journals:
 - point of view of **readers**
 - point of view of **writers**
- Problems of standardization of interfaces
[Lomprez 07]
- Studies on modeling of information retrieval
[Tricot 98]

Methodology for analysis of activity traces

- Combining the **flexibility** of the statistical analysis
- With the **precision** of activity analysis
- Get information on the **client side**
- Role of the **user as actor** analysis

Issues

- **Decentralization** of resources assessment (top / down)
- Enhanced **autonomy** in libraries from data provided by publishers
- Better **knowledge** of the actual activity of retrieval
- Reduction or **cost** optimization

Definitions

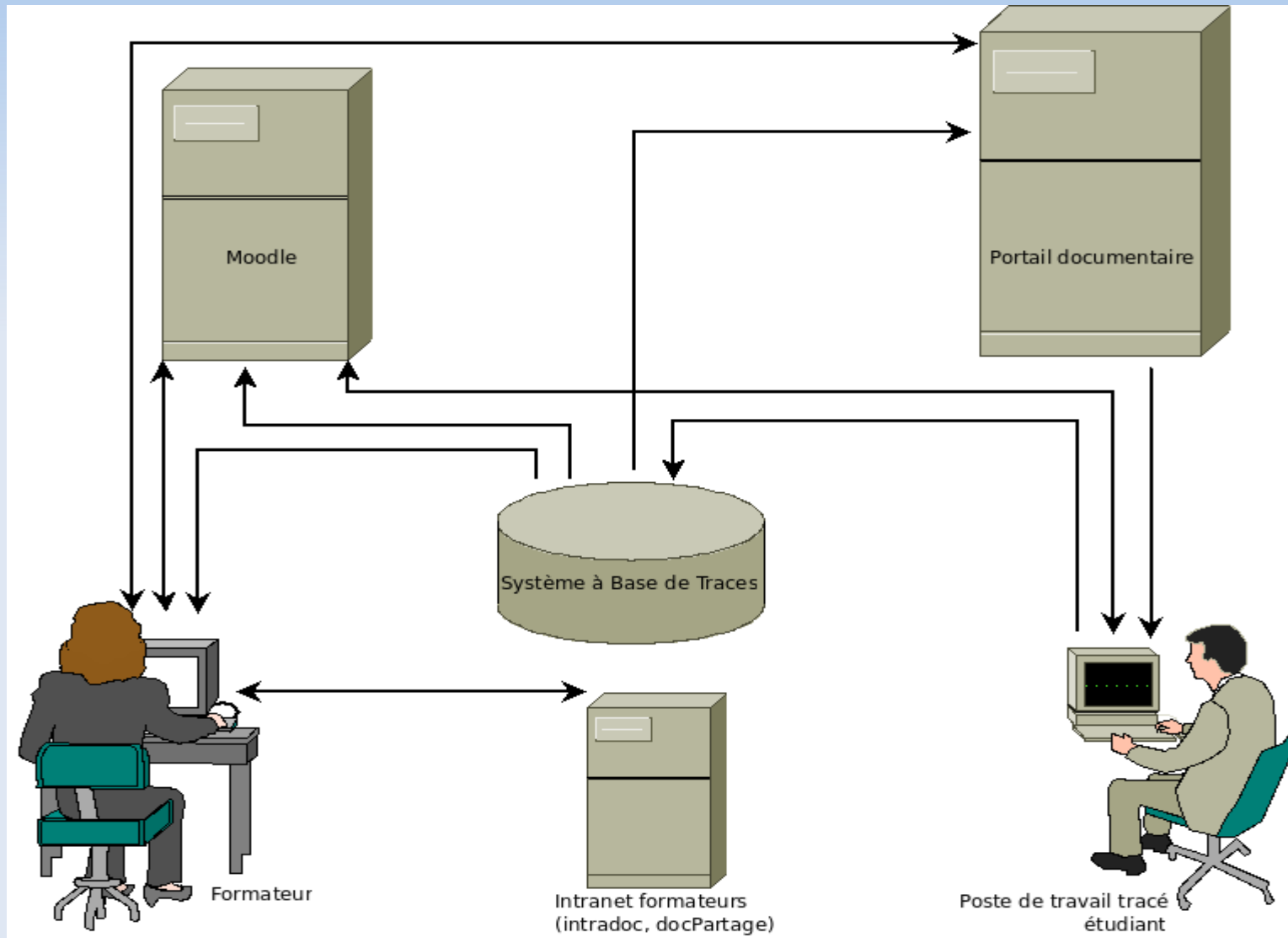
- Management system based on traces
- Observed
- Collection
- Trace interaction
- Documentary sequences
- Transformation
- Visualization

Trace database management system

TBMS

- **Computer system**, with or without memory,
- managing a database of traces modeled through a **system observed**
- and providing processing **services**, application, sharing ...

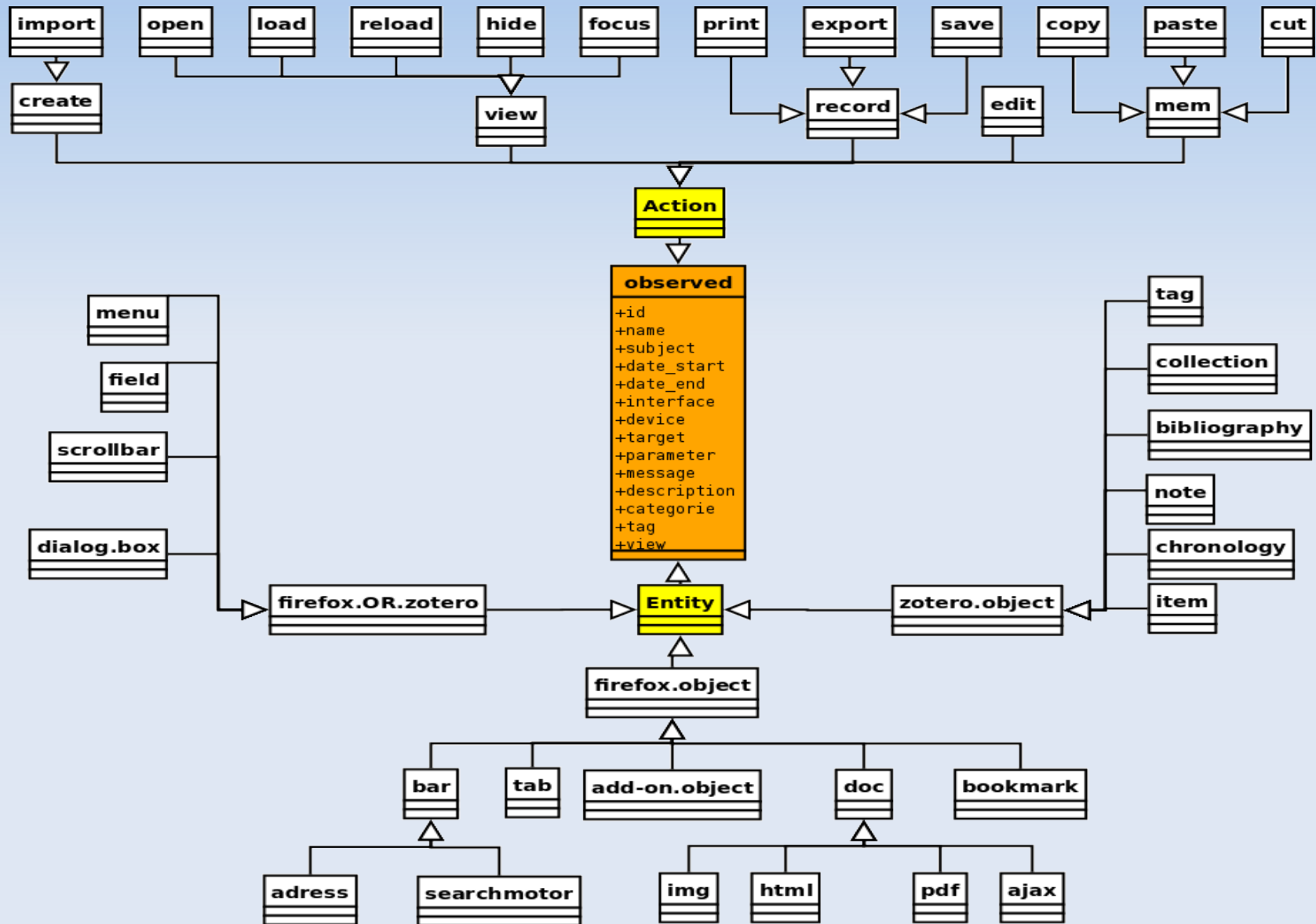
Draft of a TBMS in library



Observed

- This is something **temporally located** in a trace modeled
- Has a defined **type**
- Has a **subject**
- May be **related** to other observed

Example de modeling observed



Collection

- Collect source: probes, system logs, audio and video record...
- Collect: creates a trace material in a database management traces

Interaction modeled traces

- **Modeled trace:** composition observed, organized according to a model trace (trace model): types, relationships, transformations ...
- **First trace:** trace directly after collection, unprocessed
- **Computed trace:** trace associated with automatic processing, related to views

Documentarizing sequences trace

- Creating a document **exchanged** outside the BCMS,
- is derived from the **native** or empirical observation (video, audio ...),
- is from a documentary sequences **of observed** (text, tables, chronology ...).

Traces transformation

- **Operation** on one or more traces modeled first or compound
- in order to **produce** a new trace modeled;
- if it is described by a model transformation, it is called **automatic**
- if it is the result of a specific intervention, it is called **manual**.

Interactive trace visualization

- **Consultation** by a user with a visual representation of a trace
- according to predefined **rules**.
- **Views** can be directly associated with different traces calculated.

Example of presentation (ergodoc)

The screenshot displays the ergodoc interface. At the top, there is a menu bar with 'Fichier', 'Connexion', 'Configuration', and 'Traces'. Below the menu is a toolbar with various icons. The main area is divided into two panes. The left pane, titled 'Utilisateurs du SBT', shows a list of users: Yannick, Julien, and Leila. The right pane, titled 'Observé', contains a table with the following columns: Clé, Sujet, Date, Nom, Paramètre, Adresse, Relation, and Note. The table lists 35 entries, each representing an observed trace. The status bar at the bottom indicates 'Bienvenue sur ergodoc !' and 'Nb. de traces : 3 Nb. de nœuds : 2'.

Clé	Sujet	Date	Nom	Paramètre	Adresse	Relation	Note
1		mar. 24 nov....	firefox.tabc...		about:blank		
2		mar. 24 nov....	firefox.unload		about:blank		
3		mar. 24 nov....	firefox.unload		about:blank		
4		mar. 24 nov....	firefox.unload		about:blank		
5		mar. 24 nov....	firefox.unload		about:blank		
6		mar. 24 nov....	firefox.unload	Google Documents	https://docs.goo...		
7		mar. 24 nov....	firefox.unload		about:blank		
8		mar. 24 nov....	firefox.unload		about:blank		
9		mar. 24 nov....	firefox.unload		https://spreads...		
10		mar. 24 nov....	firefox.unload		https://mail.goo...		
11		mar. 24 nov....	firefox.unload		about:blank		
12		mar. 24 nov....	firefox.unload		about:blank		
13		mar. 24 nov....	firefox.unload		about:blank		
14		mar. 24 nov....	firefox.unload	Comptes Google	https://www.go...		
15		mar. 24 nov....	firefox.unload	Comptes Google	https://www.go...		
16		mar. 24 nov....	firefox.unload	Google Documents	https://docs.goo...		
17		mar. 24 nov....	firefox.unload		https://spreads...		
18		mar. 24 nov....	firefox.unload		about:blank		
19		mar. 24 nov....	firefox.tabc...		https://addons....		
20		mar. 24 nov....	firefox.tabc...		https://addons....		
21		mar. 24 nov....	firefox.unload		about:blank		
22		mar. 24 nov....	firefox.unload		about:blank		
23		mar. 24 nov....	firefox.unload		https://docs.goo...		
24		mar. 24 nov....	firefox.unload		https://docs.goo...		
25		mar. 24 nov....	firefox.unload		about:blank		
26		mar. 24 nov....	firefox.unload		https://spreads...		
27		mar. 24 nov....	firefox.unload		about:blank		
28		mar. 24 nov....	firefox.unload	Comptes Google	https://www.go...		
29		mar. 24 nov....	firefox.unload		about:blank		
30		mar. 24 nov....	firefox.unload		https://mail.goo...		
31		mar. 24 nov....	firefox.unload	Google Documents	https://spreads...		
32		mar. 24 nov....	firefox.unload		https://mail.goo...		
33		mar. 24 nov....	firefox.unload		https://mail.goo...		
34		mar. 24 nov....	firefox.unload		https://mail.goo...		
35		mar. 24 nov....	firefox.unload		https://mail.goo...		

Activity model retrieval

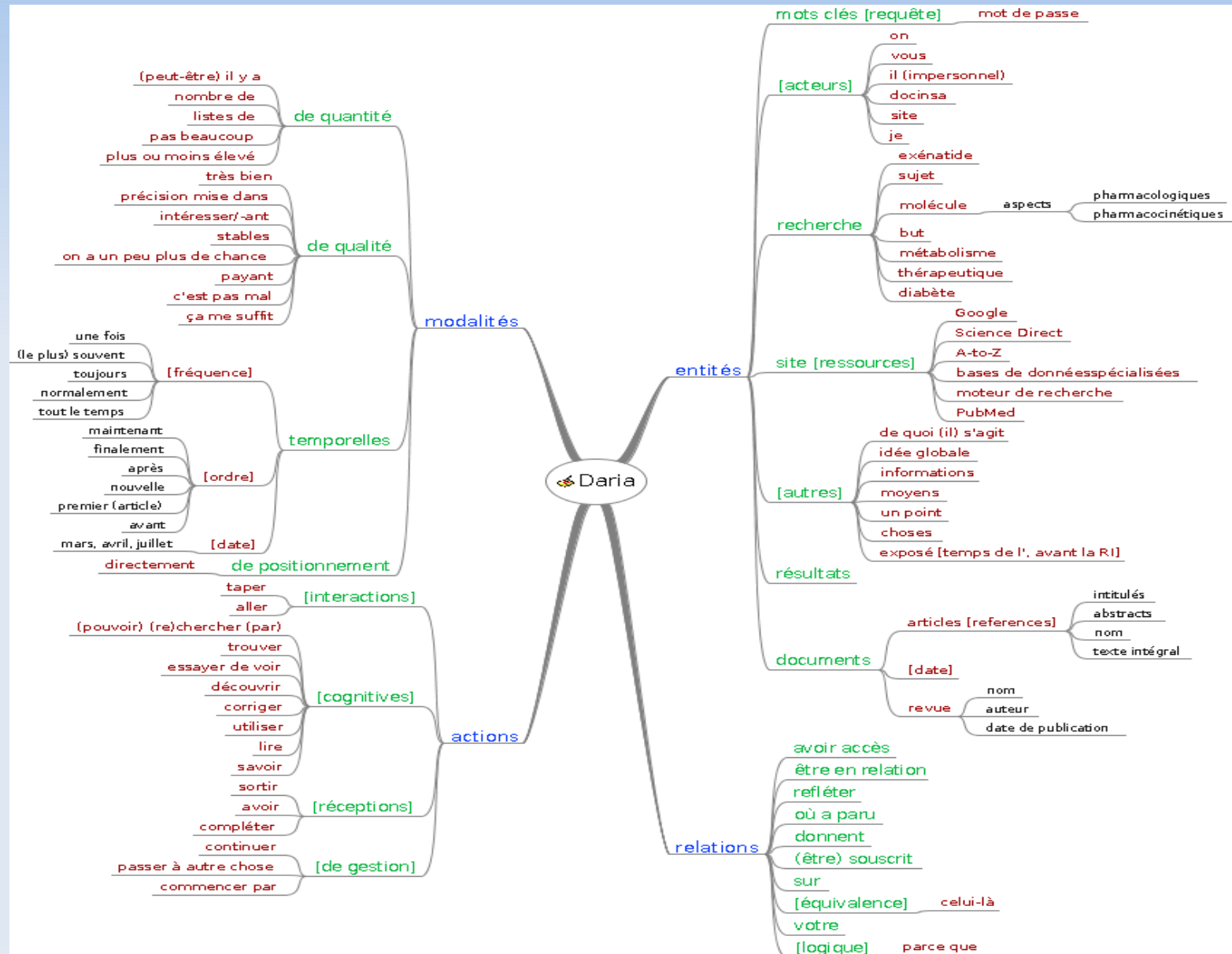
The discovery of a system of reflexivity [Jermann 01] involves several steps:

- Model collection
- Construction of a model trace
- Defining a profile evaluative
- Representative traces
- Creating a calculation engine traces
- Classification of resources

1. Data collection

- Study the **ergonomics** of the interfaces used
- Studies of the **semantics** of the retrieval activity
- Identify **user actions** relevant
- Choose **site implementations** in the code of systems observed

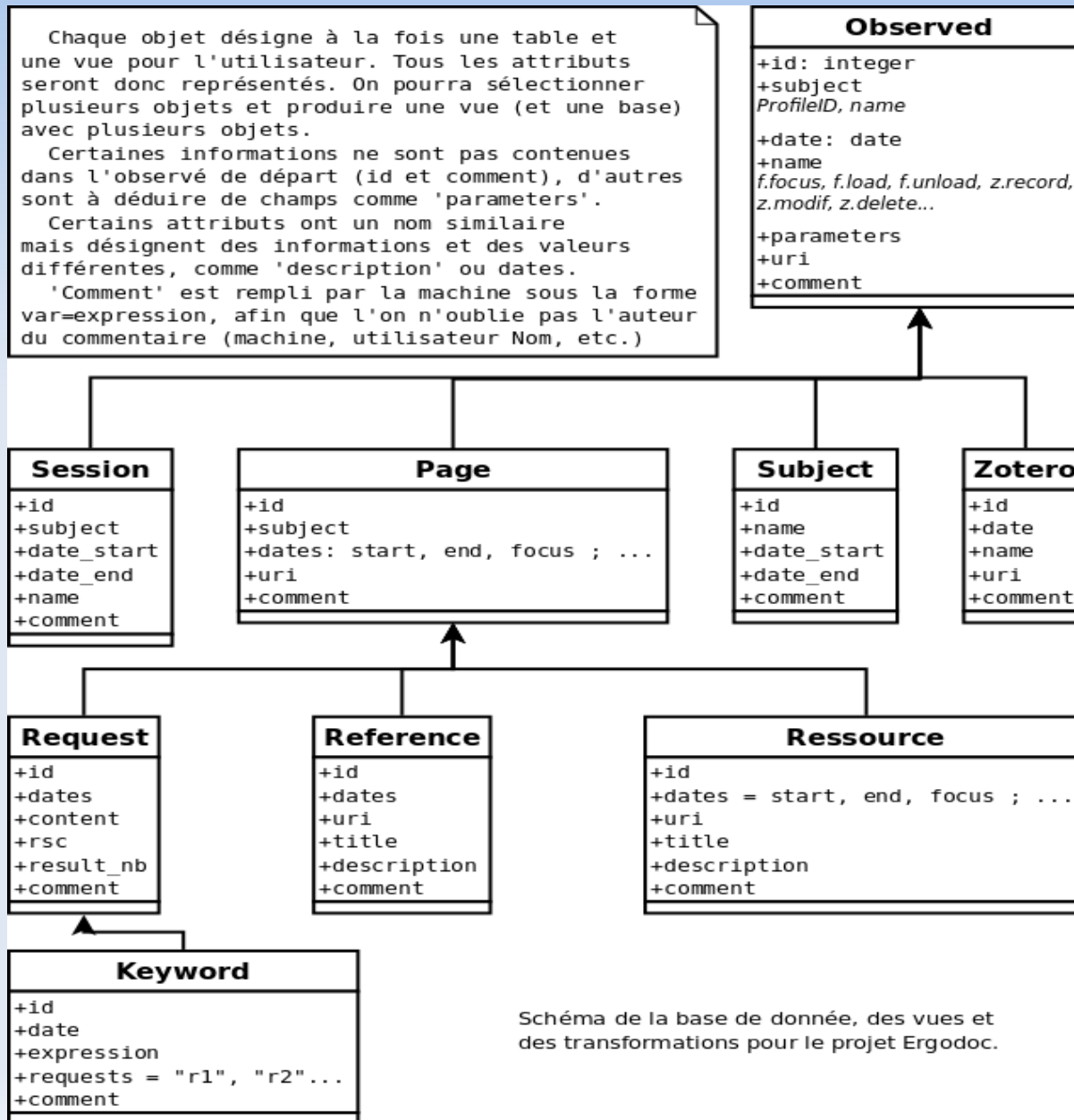
Example analysis of the semantics of the user



2. Construction of a modeled trace

- Defining a model seen as an object with **attributes**: id, description, dates ...
- Building a **hierarchy** of actions that users can describe observed, giving a record first
- Define **transformations** from the first model track to make it usable.

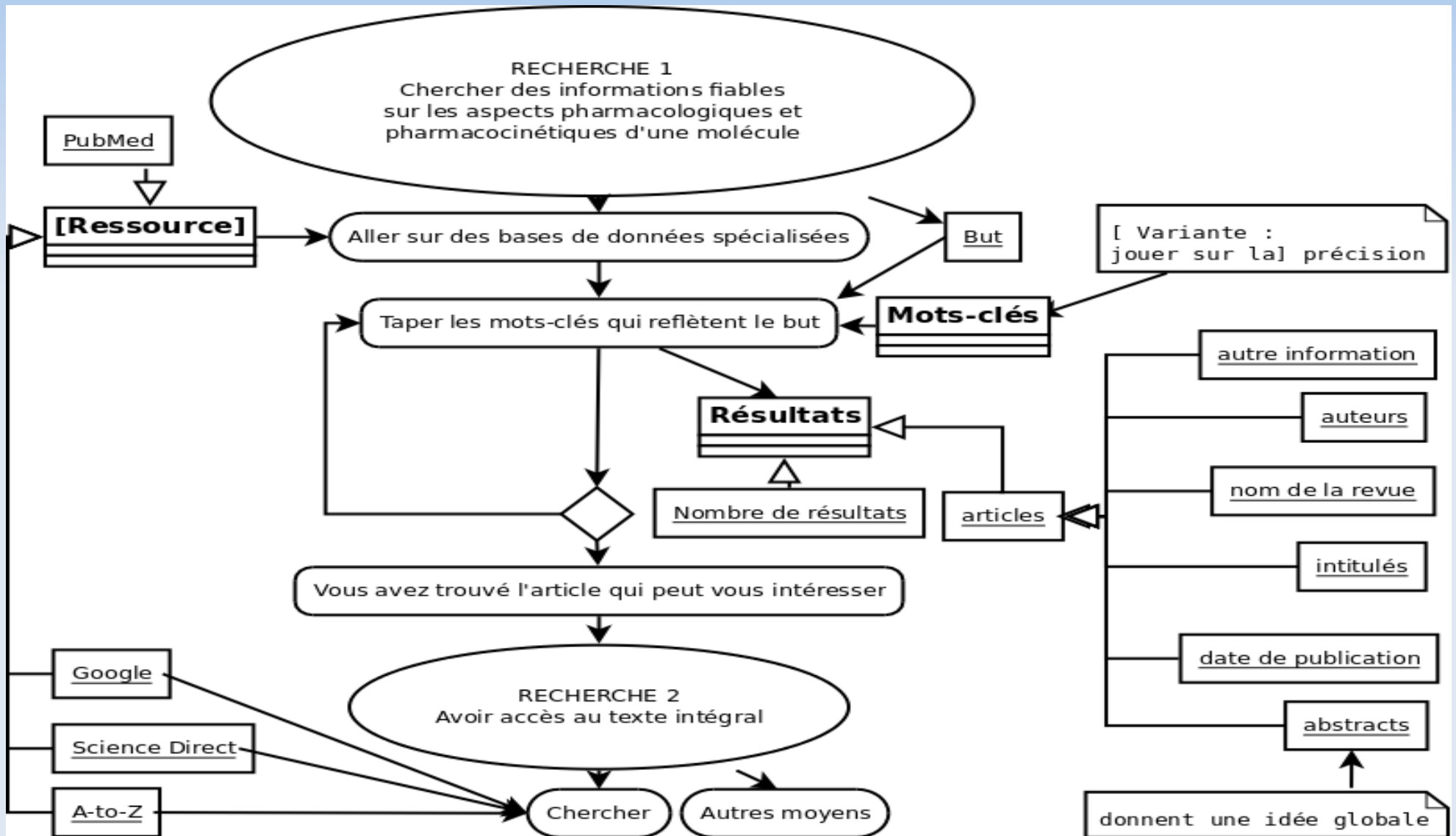
Example of transformations



3. Defining a profile evaluative

- To evaluate a resource, the profile concept refers to a type of use and user type.
- These types represent a model of transformation.
- This avoids the simplicity of the model action = one point for the resource.
- Example: saving a document in Zotero + display for at least 2 'document.

Example of search model



4. Visualization of traces

- Choice of **modes of representation**:
 - tabular form;
 - under formpe chronology.
- Opportunity to **comment** on the tracks (attribute "notes").
- The analysis of these comments may lead to further evaluation using a **semantic formalism** appropriate, eg. "Eval = too Wait" (subjective?).

5. Creating a calculation engine traces for evaluation

- We define a standard activity model or **ideal type** (eg presence of steps with expected activity...)
- We **compare** this model with that described by the collector for real activity.
- It **regulates** and adjusts on the business model based on user profiles, observed constants, etc..

6. Classification of resources

- It is based on the traces calculated by comparing the traces on the actual activity with **expected patterns, as automaton** .
- It is to **reduce** these traces evaluation indicators, which means to interpret the activity with reservations, which is a work of **humans**.

Conclusion

- The proposed methodology tries to **combine** the advantages of qualitative analysis (ergonomic) and quantitative analysis (data mining).
- It doesn't avoid the difficulties of comparing actual activity with the activity for early or statistical interpretation.
- It offers a rich from a semantic activity.
- Other advantages: ownership by the user, sharing, collaboration, etc..

Projet ergodoc

<https://addons.mozilla.org/fr/firefox/addon/51326/>

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Modules pour Firefox

Catégories dans Avancé

Modules pour Firefox

 **ergodoc add-on 0.1**
par [thibaud74](#)



Module pour augmenter la réflexivité de la recherche d'information par la visualisation des traces d'activités.

expérimental

Version 0.1

Fonctionne avec Firefox: 3.0 – 3.7a1pre

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Développeur [thibaud74](#)

Rencontrez le développeur

Learn why ergodoc add-on was created and find out what's next for this add-on.



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Thank you for your attention!