

WebDSign



WebDSign: managing trust on the whole Web

Overview and general explanation, version 0.5

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Many thanks to WJ

There is no « *wide trust* » on the Web

Web users frequently ask about the reliability and quality of online information

- **Who is the real author? Can I be sure that the information comes from trustable sources?**
- **Is the information displayed by my browser reliable?**
- **Which information is more critical? Before granting confidence can I get evaluation made by people I trust (friends, experts, institutions...)?**

WebDSign, our solution for certification of web information, provides answers to these questions

- **WebDSign is a set of softwares and services**
- It transforms data published on the graffiti-wall-Web into rock-solid information, **deriving authentication of documents into authentication of information**
- It enables any Web user to **sign and seal** (forbidding any unwanted modification) **anything he publishes** and to **issue an opinion on anything published by another user**
- It **collects, protects, transports and presents user-emitted evaluations** about any published information
- Its logic rests on the **production of seals** regarding online information, as well as on the **gathering of information contained in published seals**
- From a technical point of view, WebDSign is **realistic and trustable**:
 - it **does not imply any modification of server software**
 - the **client part can be opensourced** therefore easily auditable (no backdoor)

What information can be certified by WebDSign?

***WebDSign seals
ensure
identification and
authentication of
online information***

Origin

Who wrote this? *even when reading a quote from a quote from a copy from a reference...* Is it signed? Can the author negate being the author?

Integrity

Do I read the exact information or a modified version?

Time stamping

Since when does this document exist?

Opinions about quality and reliability

What do people or institutions trusted by me think of a given document? What do they like online?

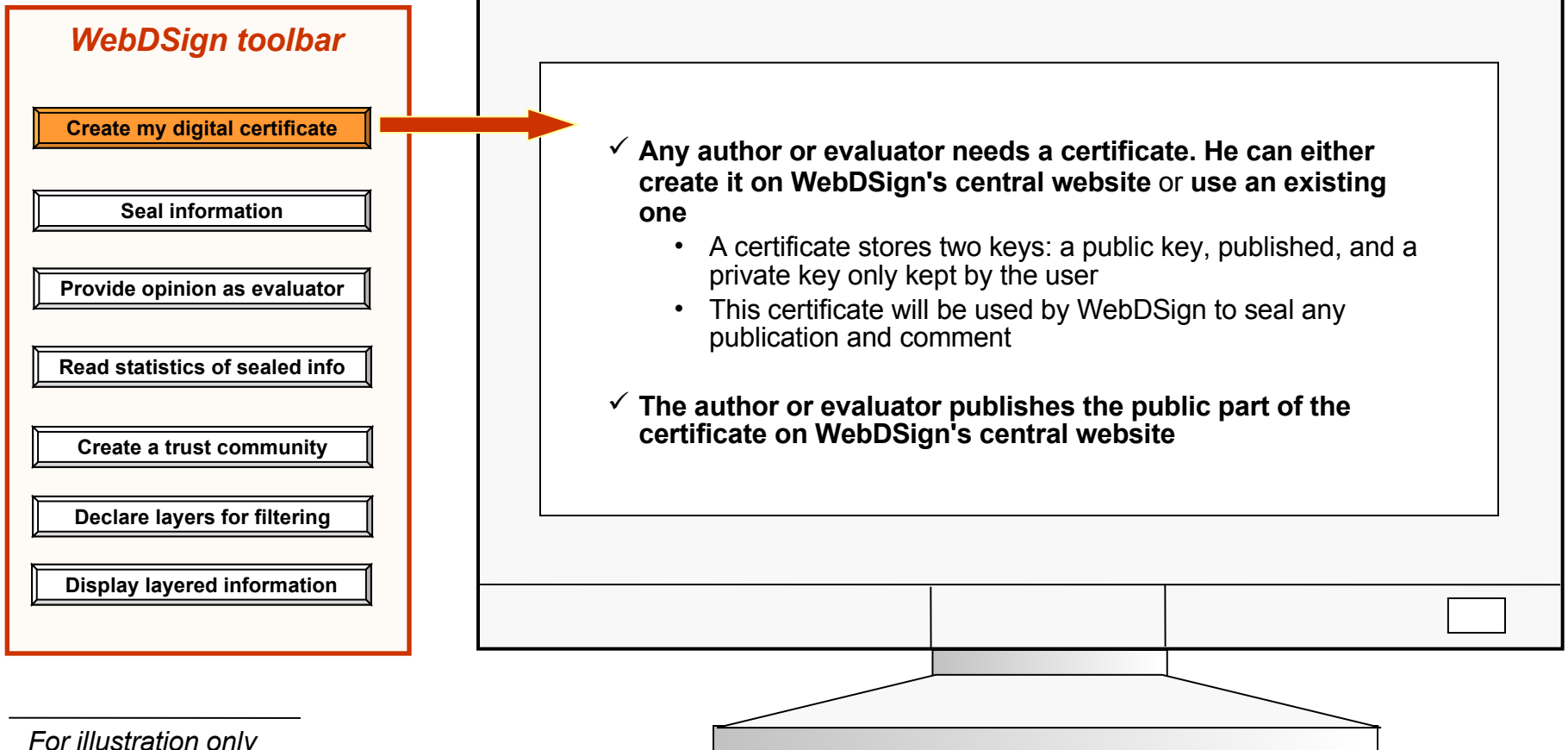
What are the benefits of WebDSign for web users?

Every Web user always can instantly « play » any role...

User's role	Typical benefits
<i>Author</i>	<ul style="list-style-type: none">▪ Enables him to sign electronic publication▪ Protects integrity of published information▪ Provides a reliable publishing date
<i>Reader</i>	<ul style="list-style-type: none">▪ Eases automatic discovery of other web users, for example with similar tastes, and facilitates sharing of favorite topics and opinions within coherent groups of Web users, thanks to collaborative filtering and without any pollution (astroturfing...)▪ Eases automatic measure of opinions▪ Offers a way to layer documents with opinions: may I automatically access preferably/only to information validated by a set of people or entities trusted by me?
<i>Evaluator</i>	<p>Issue opinions upon documents and users (author or evaluator), his opinions will always be available to public through link to the subjacent, even if the author doesn't want to integrate these comments</p>

How does WebDSign work?

1. Any web user willing to be an author or evaluator creates his own digital certificate(*) in order to seal

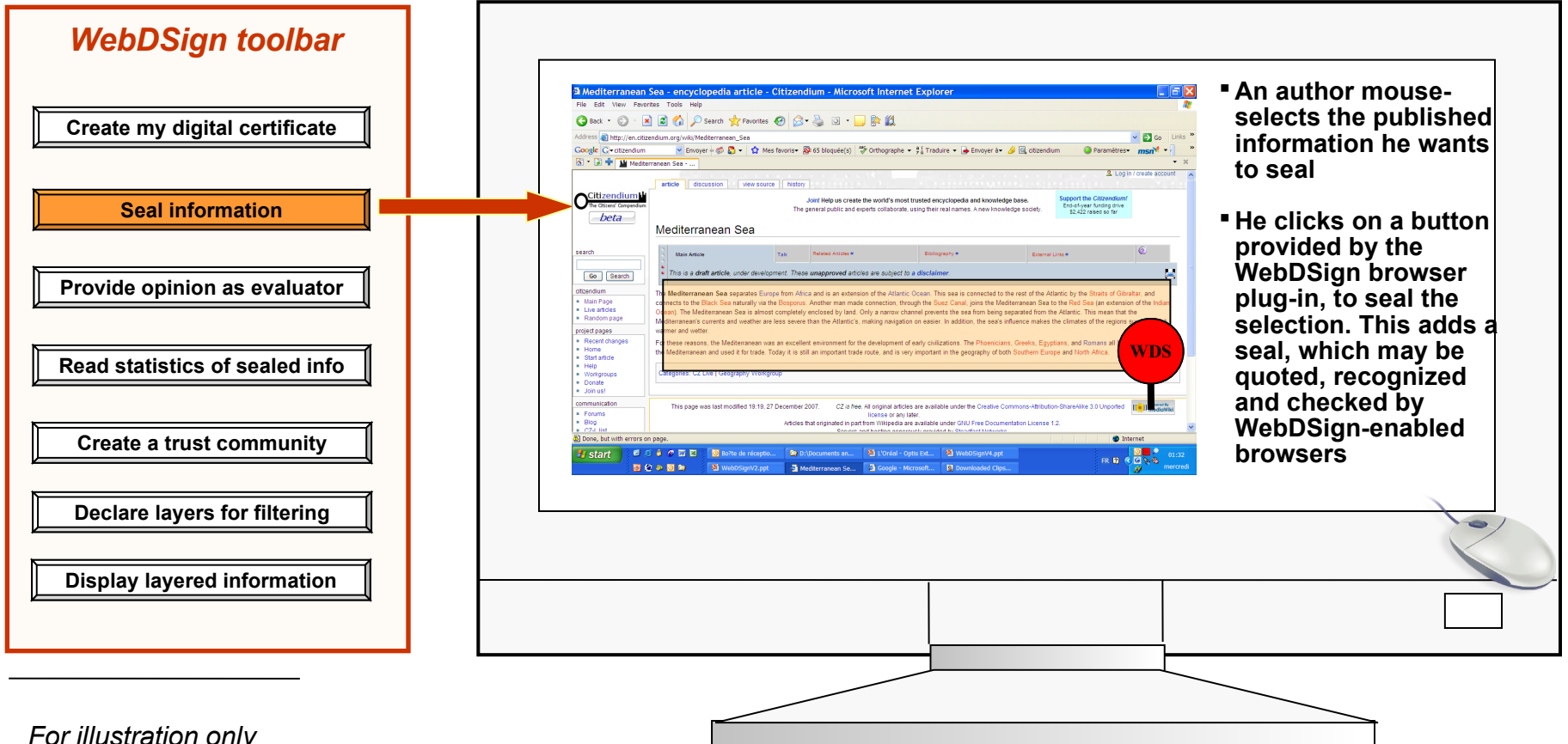


For illustration only

(*) A certificate is a digital piece of information enabling someone to be identified and somewhat described

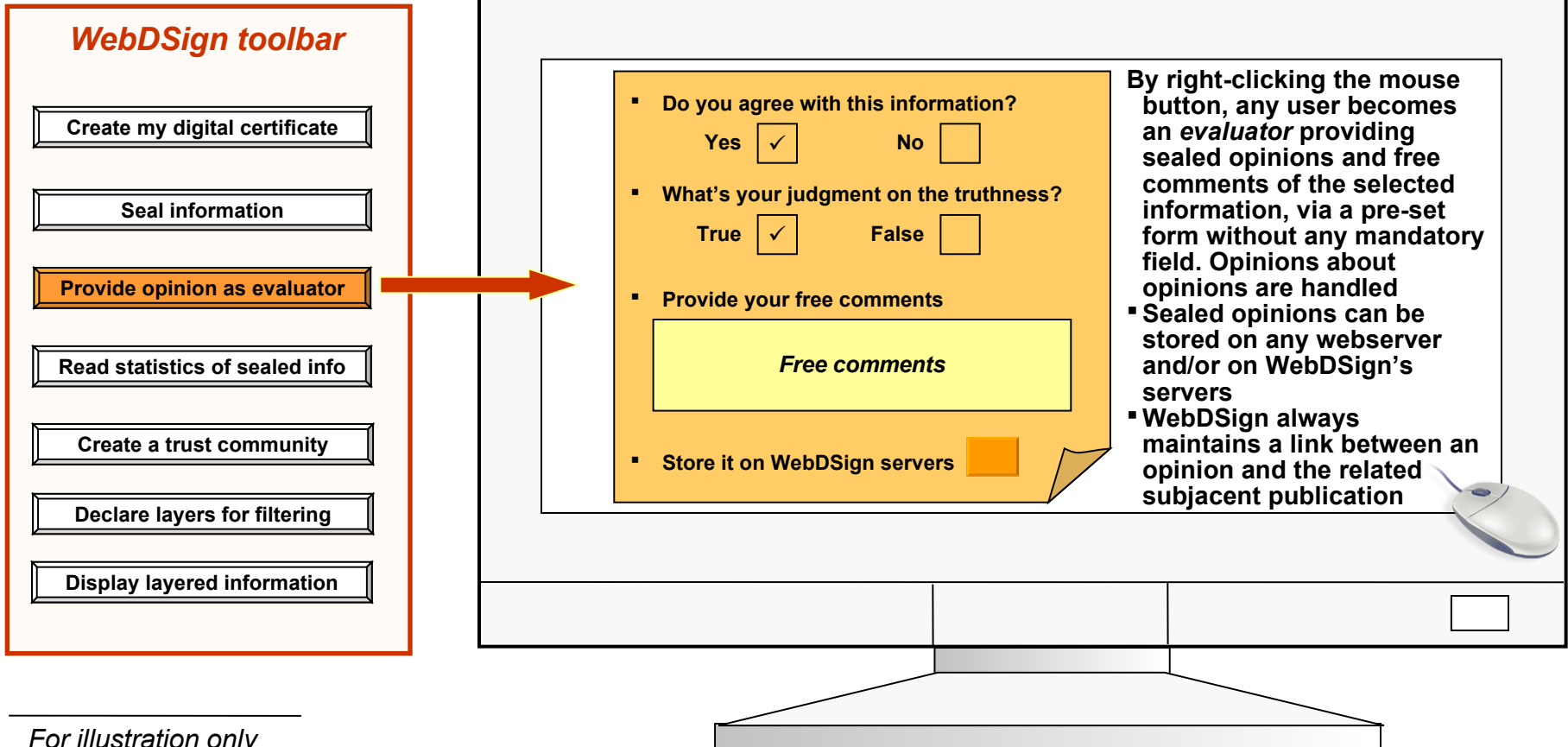
How does WebDSign work?

2. An author can then use the certificate to seal the whole document he wishes to publish on the Web (or part of it)



How does WebDSign work?

3. Any user wanting to issue an opinion ('evaluator') uses his certificate to provide opinions for any published document or part of it



For illustration only

How does WebDSign work?

4. Any reader can choose to display (or not) the sealed opinions managed and gathered by WebDSign

WebDSign toolbar

Create my digital certificate

Seal information

Provide opinion as evaluator

Read statistics of sealed info

Create a trust community

Declare layers for filtering

Display layered information

By right-clicking the mouse button, any reader visualizes the trust statistics related to sealed information

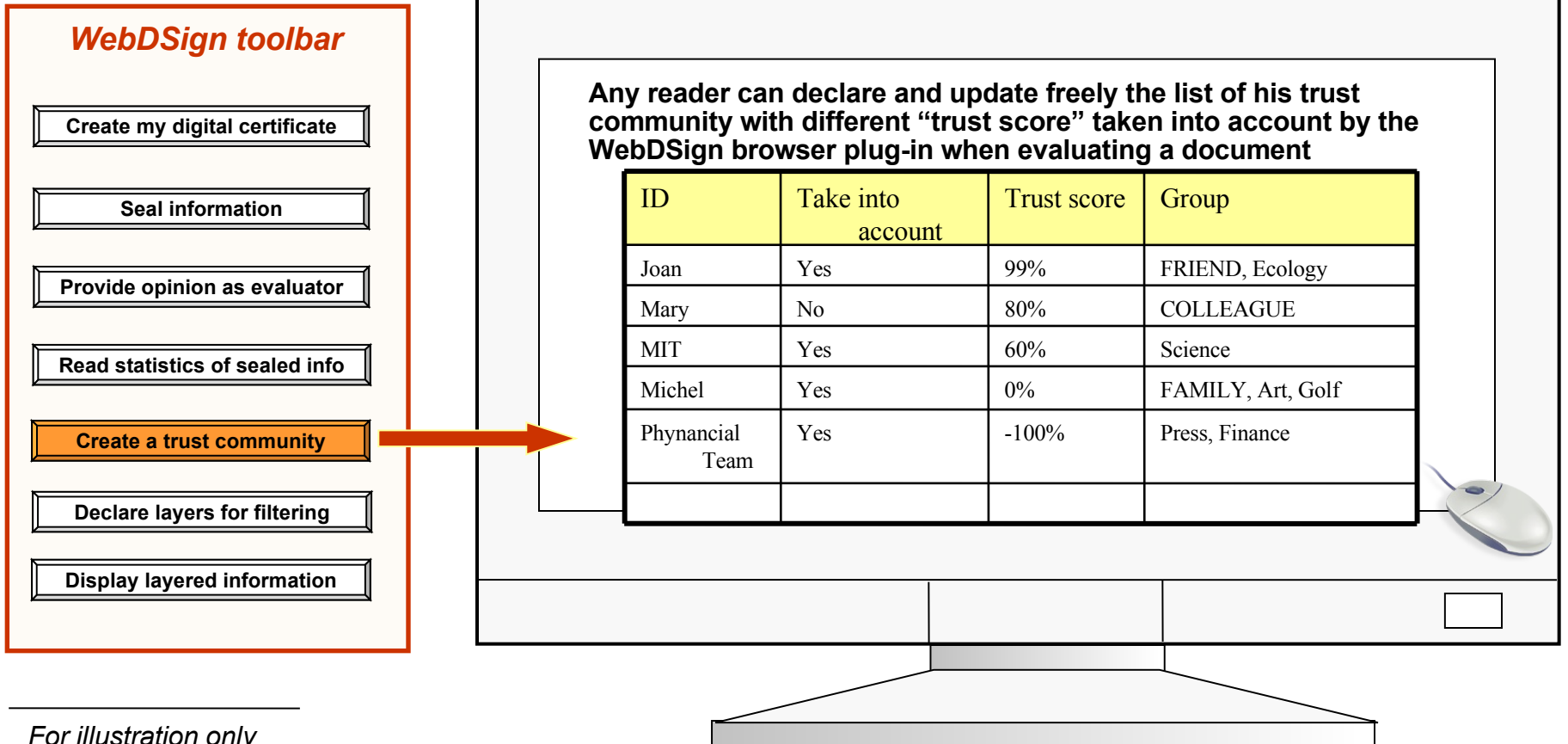
Any opinion is taken into account with respect to the trust granted to its author by the reader

Agreement rate 20%
Truthness rate: 30%
Free comments:
User 1, URL link, date
User 2, URL link, date
User N, URL link, date

For illustration only

How does WebDSign work?

Any reader has the possibility to constitute and maintain the list of his trusted sealers



For illustration only

How does WebDSign work?

Any reader can enjoy a 'layered' Web-browsing session, only accessing to URLs corresponding to a defined set

WebDSign toolbar

Create my digital certificate

Seal information

Provide opinion as evaluator

Read statistics of sealed info

Create a trust community

Display layers for filtering

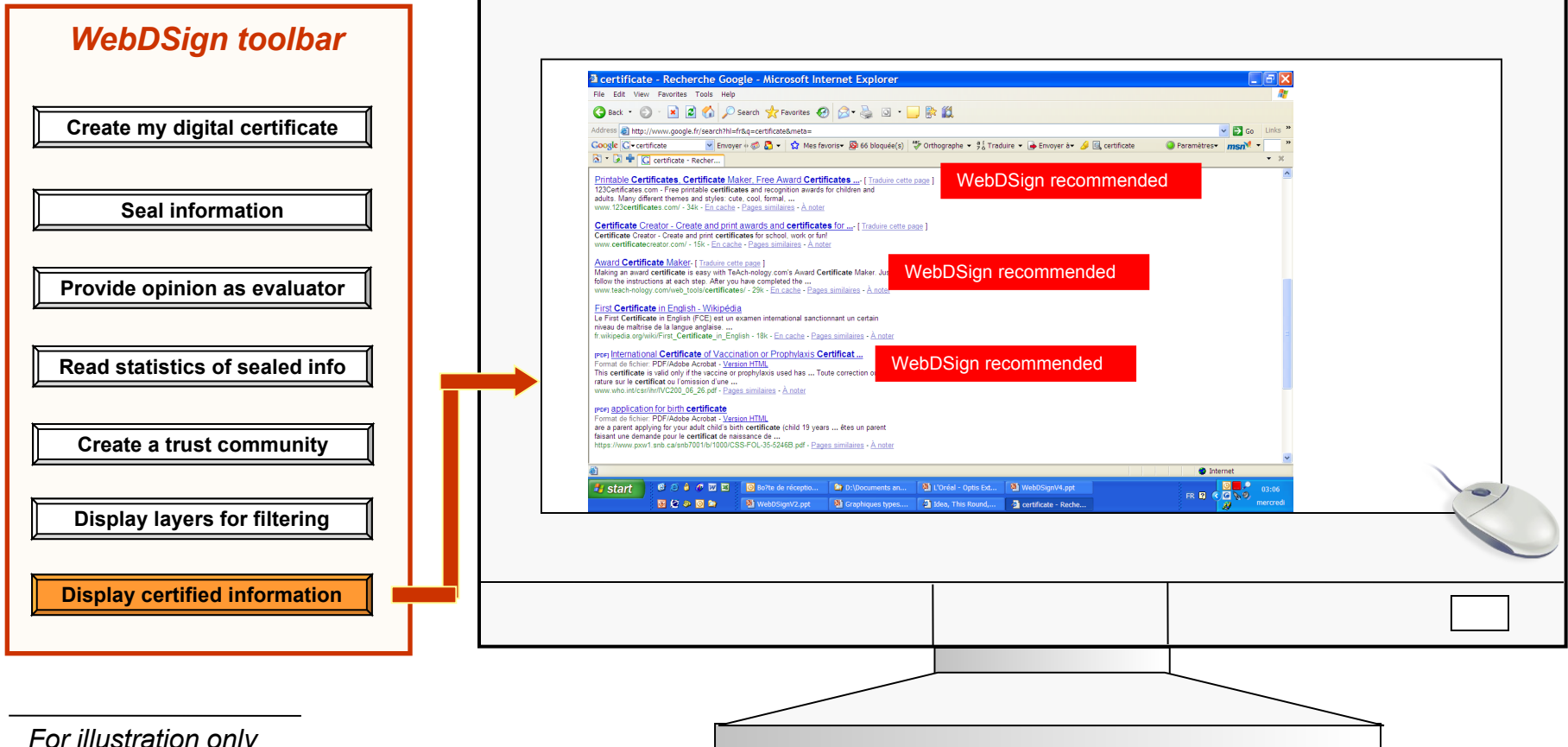
Display certified information

- **JOAN_RATING > 50%**
- **FINANCE**
- **MARY_RATING < 10%**
- **Options: boolean operators, parenthesis...**

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How does WebDSign work?

6. Any reader can configure his criteria so as to take into account appreciation on his trusted sealers for information filtering purpose



WebDSign business model

Certificate signature. For any author wanting to be prove his/her real identity

Cross-certification. Certificates issued by third parties (certification authorities, for example Verisign or an in-house PKI) will be honored by the central system as providing an identity proof

Timestamping. For authors wanting to be able to prove that they were the first to state something. WebDSign will use existing timestamping services, recognized by various jurisdictions

Storage. Long-term public conservation of seals (mainly for purposes related to non-repudiation)

Monitoring. The 'alert, something you criticized/liked/disliked/whatever changed!' service, not tied to any action/dissimulation of the information publisher. Think 'sort of RSS able to automatically alert after a modification even if the author does it discreetly, without announcing anything'

Enhanced layers. Laying upon collaborative filtering.

WebDSign extended fields of application

Experts guild

Specific voting or decision-making systems