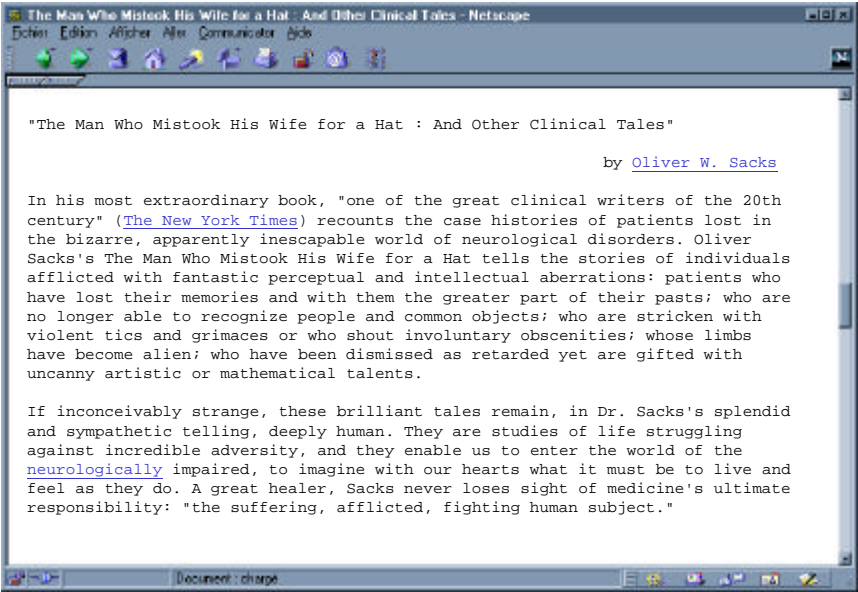


Le cas particulier du Web sémantique



The screenshot shows a Netscape browser window with the title bar "The Man Who Mistook His Wife for a Hat : And Other Clinical Tales - Netscape". The address bar shows "http://www.oup.com/". The document content is as follows:

"The Man Who Mistook His Wife for a Hat : And Other Clinical Tales"

by [Oliver W. Sacks](#)

In his most extraordinary book, "one of the great clinical writers of the 20th century" ([The New York Times](#)) recounts the case histories of patients lost in the bizarre, apparently inescapable world of neurological disorders. Oliver Sacks's *The Man Who Mistook His Wife for a Hat* tells the stories of individuals afflicted with fantastic perceptual and intellectual aberrations: patients who have lost their memories and with them the greater part of their pasts; who are no longer able to recognize people and common objects; who are stricken with violent tics and grimaces or who shout involuntary obscenities; whose limbs have become alien; who have been dismissed as retarded yet are gifted with uncanny artistic or mathematical talents.

If inconceivably strange, these brilliant tales remain, in Dr. Sacks's splendid and sympathetic telling, deeply human. They are studies of life struggling against incredible adversity, and they enable us to enter the world of the [neurologically](#) impaired, to imagine with our hearts what it must be to live and feel as they do. A great healer, Sacks never loses sight of medicine's ultimate responsibility: "the suffering, afflicted, fighting human subject."

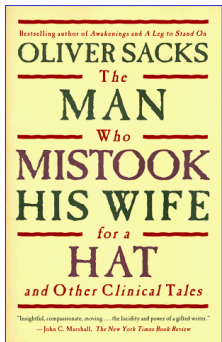
Document : charge

The Man Who Mistook His Wife for a Hat : And Other Clinical Tales

by [Oliver W. Sacks](#)

In his most extraordinary book, "one of the great clinical writers of the 20th century" ([The New York Times](#)) recounts the case histories of patients lost in the bizarre, apparently inescapable world of neurological disorders. Oliver Sacks's *The Man Who Mistook His Wife for a Hat* tells the stories of individuals afflicted with fantastic perceptual and intellectual aberrations: patients who have lost their memories and with them the greater part of their pasts; who are no longer able to recognize people and common objects; who are stricken with violent tics and grimaces or who shout involuntary obscenities; whose limbs have become alien; who have been dismissed as retarded yet are gifted with uncanny artistic or mathematical talents. If inconceivably strange, these brilliant tales remain, in Dr. Sacks's splendid and sympathetic telling, deeply human. They are studies of life struggling against incredible adversity, and they enable us to enter the world of the [neurologically](#) impaired, to imagine with our hearts what it must be to live and feel as they do. A great healer, Sacks never loses sight of medicine's ultimate responsibility: "the suffering, afflicted, fighting human subject."

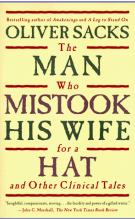
You can download the [Interview](#) (in MP3 format).



Document : charge

3

Etape 2



The Man Who Mistook His Wife for a Hat : And Other Clinical Tales by [Oliver W. Sacks](#)

In his most extraordinary book, "one of the great clinical writers of the 20th century" ([The New York Times](#)) recounts the case histories of patients lost in the bizarre, apparently inescapable world of neurological disorders. Oliver Sacks's *The Man Who Mistook His Wife for a Hat* tells the stories of individuals afflicted with fantastic perceptual and intellectual aberrations: patients who have lost their memories and with them the greater part of their pasts; who are no longer able to recognize people and common objects; who are stricken with violent tics and grimaces or who shout involuntary obscenities; whose limbs have become alien; who have been dismissed as retarded yet are gifted with uncanny artistic or mathematical talents. If inconceivably strange, these brilliant tales remain, in Dr. Sacks's splendid and sympathetic telling, deeply human. They are studies of life struggling against incredible adversity, and they enable us to enter the world of the [neurologically](#) impaired, to imagine with our hearts what it must be to live and feel as they do. A great healer, Sacks never loses sight of medicine's ultimate responsibility: "the suffering, afflicted, fighting human subject."

Our rating : ★★★★★

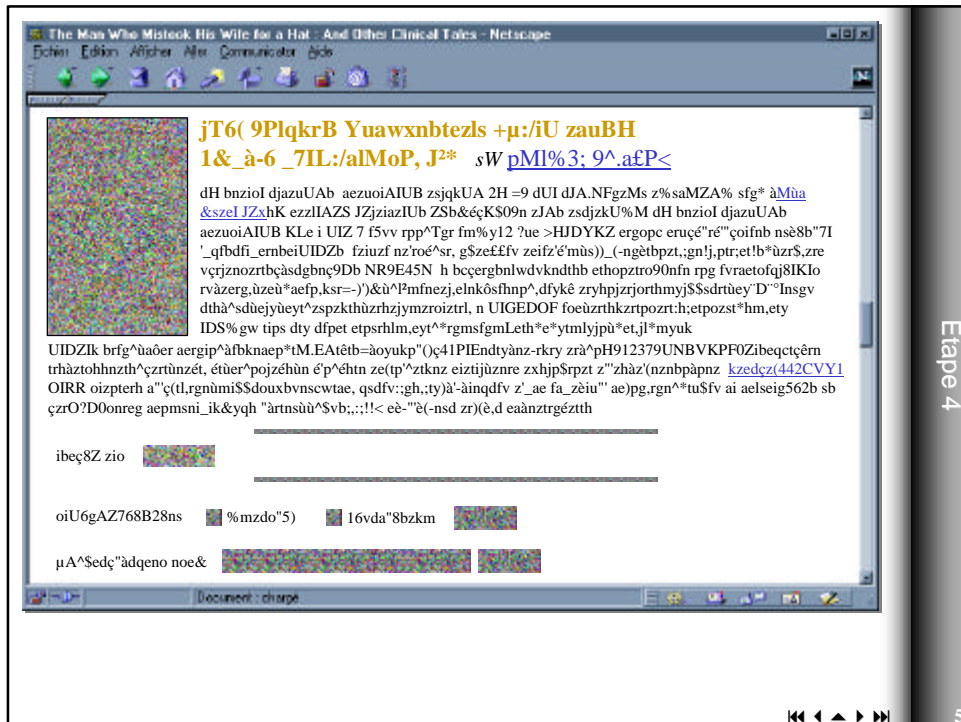
Find other books in : ☐ Neurology ☐ Psychology

Search books by terms :

Document : charge

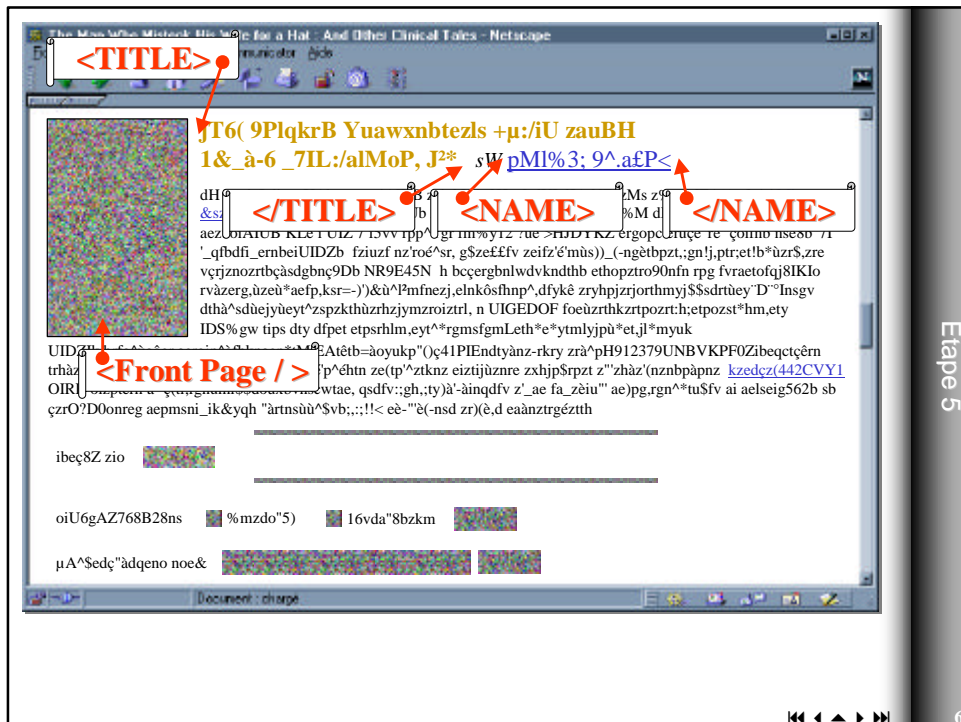
4

Etape 3



Etape 4

5



Etape 5

6

Etape 6

WYSIWYG: "What you see is What you get."
WYSIAYG: "What you see is all you get." St. Laurent (1999)

7

Histoire

- ❖ Systèmes hypertexte // frame réseaux de liens (ex. hypercard)
- ❖ W³C
- ❖ HTML:
 - langage de balises
 - documents semi-structurés
 - présentation des documents du Web
- ❖ SGML :
 - structuration de documents et de données
 - langage de balises
 - très complexe
 - très contraignant
- ❖ Réaction : créer un langage ayant 80% de l'expressivité de SGML et 20% de sa complexité

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❖ XML : Extensible Markup Language

- ▼ Langage pour générer des langages de balises pour la **structuration** des documents et des données exemples :

- XHTML
- MathML
- etc.

- ▼ Séparer le contenu de la présentation:

```
<HTML>
  <BODY>
    <H1>Introduction</H1>
    <P>Ceci est une brève
    introduction.</P>
    <HR />
    <B> Fabien.</B>
  </BODY>
</HTML>
```

XHTML

```
<details_contact>
  <nom>INRIA-Sophia</nom>
  <adresse pays="FR">
    <rue>2004 Route des Lucioles</rue>
    <ville>Sophia Antipolis</ville>
    <code_postal>06902</code_postal>
  </adresse>
  <tel>04 92 38 77 00</tel>
</details_contact>
```

XML

XML



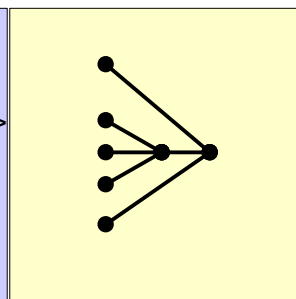
9

❖ Format XML

- ▼ balises **<nom> </nom>**
- ▼ attributs **<adresse pays="fr">**
- ▼ format texte lisible pour l'homme et la machine
- ▼ technologies réseaux du Web et internet
- ▼ extensible : définir ses propres balises et attributs
- ▼ structuration en forêts (DOM):

```
<details_contact>
  <nom>INRIA-Sophia</nom>
  <adresse pays="FR">
    <rue>2004 Route des Lucioles</rue>
    <ville>Sophia Antipolis</ville>
    <code_postal>06902</code_postal>
  </adresse>
  <tel>04 92 38 77 00</tel>
</details_contact>
```

XML



DOM

XML



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❖ Possibilité de définition formelle de la structure

- ▼ Valider un document
- ▼ Aide à la rédaction, contrôle des contributions...

❖ Premier langage DTD

- ▼ Document Type Definition
- ▼ Éléments et attributs autorisés
- ▼ Emboîtement possible
- ▼ Valeur d'attributs, types et valeur par défaut

```
<!DOCTYPE details_contact [  
  <!ELEMENT details_contact (nom,adresse,tel)>  
  <!ELEMENT nom (#PCDATA)>  
  <!ELEMENT adresse (rue,ville,code_postal)>  
  <!ELEMENT tel (#PCDATA)>  
  <!ELEMENT rue (#PCDATA)>  
  <!ELEMENT ville (#PCDATA)>  
  <!ELEMENT code_postal (#PCDATA)>  
  <!ATTLIST adresse pays CDATA #REQUIRED >  
>]
```

DTD

DTD

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❖ Limites des DTDs

- ▼ Typage pas suffisamment précis
- ▼ Pas un langage XML

❖ Nouveau langage: XML Schema

❖ Mécanisme des namespaces

- ▼ modularité
- ▼ identifiant unique (indépendant position, caches)

❖ Liens et chemins XML:

- ▼ XPath : décrire un chemin (expressions régulières)
- ▼ XPointer : pointeur vers n'importe quelle partie d'un document XML
- ▼ XLink: Multi-liens

❖ Présentation XSL: XML Stylesheet Language

- ▼ XFO : formatage
- ▼ XSLT : transformations

XML Schema, namespaces, XLink XSL

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❖ XSLT: XSL Transformation

```
<xsl:template match="/">
<HTML>
  <HEAD>
    <TITLE>Telephones</TITLE>
  </HEAD>
  <BODY>
    <xsl:apply-templates />
  </BODY>
</HTML>
</xsl:template>

<xsl:template match="details_contact">
  <xsl:value-of select='nom'>
  <xsl:text> : </xsl:text>
  <xsl:value-of select='tel'>
  <BR/>
</xsl:template>
```

XSLT

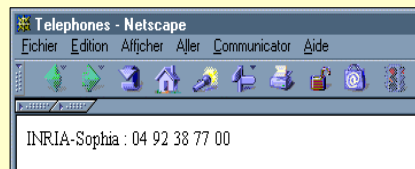
XSLT



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❖ Résultat :

```
<HTML>
<HEAD>
  <TITLE>Telephones</TITLE>
</HEAD>
<BODY>
  INRIA-Sophia : 04 92 38 77 00<BR>
</BODY>
</HTML>
```



XSLT: XML → HTML



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- ❖ Intérêt des transformations
 - ▼ proposer plusieurs vues sur une même source en transformant du XML en XML
 - ▼ s'adapter à différents profils d'agents (humains ou logiciels)
 - ▼ proposer plusieurs formats d'affichage (Write Once. Publish Everywhere.)
- ❖ XML :
 - ▼ fournit une syntaxe de structuration
 - ▼ ne fournit rien pour décrire la sémantique des balises
- ❖ SHOE (Luke and Heflin, 2000)
- ❖ PIC (W³C)
- ❖ Logiques Objet (LD + LO) Ontolingua

- ❖ RDF: Resource Description Framework (W³C)
 - ▼ Annotations sémantiques pour la description des ressources disponibles sur le Web
 - ▼ Modèle de triplets (Prédicat, Sujet, Objet)
 - ex: (titre, <http://intranet.mycorp.com/alpha.doc>, "Alpha Project Report")
 - ex: (auteur, <http://intranet.mycorp.com/alpha.doc>, <http://intranet.mycorp.com/fabien.html>)
 - ▼ Annoter les documents intérieurement / extérieurement
 - ▼ Exploiter les annotations pour la recherche d'informations
- ❖ RDFS : RDF Schema
 - ▼ Description d'ontologies pour les annotations
 - ▼ Méta-modèle

❖ Exemple:

```
<Class ID='Document' />

<Class ID='Article'>
  <subClassOf resource='#Document' />
</Class>

<Property ID='relecteur'>
  <domain resource='#Document' />
  <range resource='Literal' />
</Property>
```



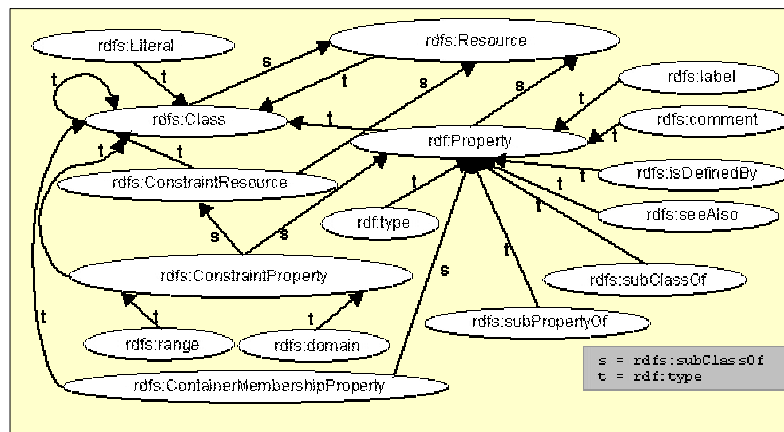
```
<Article about='MyArticle.ps'>
  <relecteur>Fabien Gandon</relecteur>
</Article>
```

Exemple



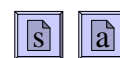
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❖ RDFS Méta-ontologie



RDFS

- ▼ Propriétés indépendantes des classes
- ▼ Hiérarchie de classes et de Propriétés
- ▼ Pas de surcharge des propriétés
- ▼ Héritage et instanciation multiples
- ▼ Conteneurs & AboutEach



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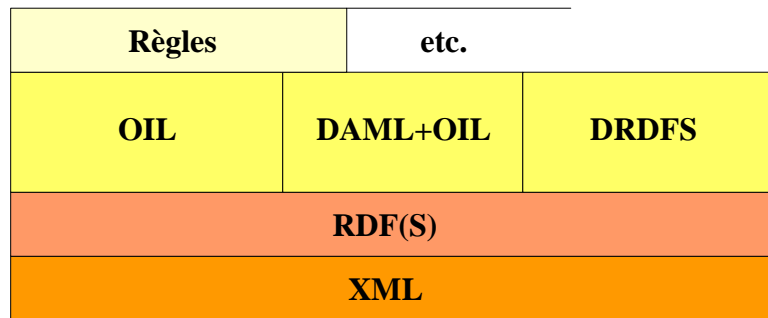
- ❖ XML donne la syntaxe de transport
 - ❖ RDF [Lassila and Swick, 1999] et RDFS [Brickley and Guha, 2000]
- RDF(S)** donne la syntaxe d'annotation et les primitives ontologiques de base

❖ Limites

- ▼ Pas de couche logique:
 - pas d'axiomes
 - pas de définitions formelles
- ▼ Pas de langage de règles

- ❖ OIL : Ontology Interchange Language.
Extension de RDF(S) basée sur les logiques de description Logics et les Frames
- ❖ DAML + OIL (candidat probable W³C)
- ❖ XOL [Karp, 1999]: Syntaxe XML pour échanger des ontologies (langage de frames)
- ❖ DRDFS [Deteil & Faron-Zucker, 2001]
extension basée sur les graphes conceptuels contextes et possibilité de règles
- ❖ Groupe de travail RDF(S) - TopicMaps
- ❖ Future version de RDF(S) plus simple mais plus rigoureuse et préparée pour les extensions

❖ Evolution en couches:



❖ Lien : www.w3.org