ONE Client
An RCP application to browse NewsML news

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Scenario

• Currently, news written by press agencies can be read by User in two different ways:
  ▪ Local Reception
    ✓ needs a very specific communication infrastructure on Client side (satellite dish, decoder, …).
  ▪ Remote Access
    ✓ allows User to access to the news directly via Internet
    ✓ in this case the User needs a specific client application for each agency installed on his/her workstation.

• The ONE solution allows meeting the needs of Users and Agencies
  ▪ A Remote multi agency access
ONE Client
ONE Client Requirements

- Multiplatform
  - Windows
  - Mac-OS X
  - Linux (gtk)
- GUI Performance
  - user can receive about 10-20 thousands news for day
- Multilanguage support
- Multimedia support
- Help and Update support
# Why Eclipse RCP?

<table>
<thead>
<tr>
<th>Technology</th>
<th>Advantage</th>
<th>Disadvantage</th>
</tr>
</thead>
</table>
| **Eclipse RCP**   | Native look&feel via SWT  
                    Update and help framework  
                    Plug-in support with OSGi standard  
                    High performance with SWT  
                    Multiplatform                  | Very complex architecture  
                    Low customization              |
| **Netbeans RCP**  | Pure 100% Java  
                    Plug-in support                              | Swing performance  
                    No native look&feel  
                    No Browser support  
                    No OSGi support          |
| **.NET Framework**| Good IDE  
                    Very simple to deploy on Windows system  
                    High performance                  | Complex to deploy on not Windows system  
                    IDE expensive  
                    IDE needs a very performed workstation |
Technical solutions

- **SWT Browser**
  - to semplify news visualization maintainance
- **Navigator Extension Point**
  - to create an extensible view to support news navigation
- **Gallery Viewer**
  - to manage gallery nebula widget in a JFace-like way
SWT Browser

• ONE client must support many kinds of news: text, photo, movies and RSS
  ▪ Photos and movies could be coded in a lot of formats
  ▪ Java does not provide useful libraries to support movies decoding

• SWT browser delegates the news visualization to the installed browser
  ▪ any new movie or photo format is usually quickly supported by any browser
  ▪ these potential changes do not impact on the ONE client code
Navigator Extension Point

• Navigator is a view used to filter news in the Title or Gallery view. This view is composed by
  ▪ CollapsibleButtons (Nebula Widget)
  ▪ Composite on which is set a StackLayout named “Navigation area”.
• Each button in the CollapsibleButtons is associated to a widget put in the “Navigation area” and it represents a specific filter type
• Currently news can be filtered by agency, topic, category and user bookmarks.
  ▪ In the future other filter types could be needed
Navigator Extension Point

Navigatore News

<table>
<thead>
<tr>
<th>Globale</th>
<th>Argomenti</th>
<th>Occorrenza</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSA241</td>
<td>ALITALIA</td>
<td>239</td>
</tr>
<tr>
<td>Flash</td>
<td>CRISI MUTUI</td>
<td>87</td>
</tr>
<tr>
<td>Dispatch</td>
<td>USA</td>
<td>84</td>
</tr>
<tr>
<td>Bulletin</td>
<td>BORSA</td>
<td>56</td>
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<tr>
<td>Urgent</td>
<td>RIFIUTI</td>
<td>52</td>
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<tr>
<td>Routine</td>
<td>FINANZIARIA</td>
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<tr>
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<td>CALCIO</td>
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<tr>
<td>AFP</td>
<td>INTESA SANPAOLO</td>
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</tr>
<tr>
<td>ANADOLU</td>
<td>REGIONI</td>
<td>40</td>
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<tr>
<td>AP</td>
<td>ELUANA</td>
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<tr>
<td>APA</td>
<td>UNIVERSITÀ</td>
<td>38</td>
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<tr>
<td>ARMOSIA</td>
<td>AP-NBA HALF</td>
<td>34</td>
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<tr>
<td>ASCA</td>
<td>ITALIA-BRASILE</td>
<td>33</td>
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<td>euro adhoc</td>
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<td>BELGA</td>
<td>ELEZIONI</td>
<td>32</td>
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<tr>
<td>FEDERALISMO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Formato Categorie
Scegli il format delle categorie
Formato Categoria: ☑ FIEG ☐ IP

Lista delle categorie

- Politica (782)
- Eco. e Fin. lt. (1245)
- Eco. e Fin. Est. (13)
- Cronaca (1087)
- Sport (195)
- Spettacolo (197)
- Estero (504)
- Regionali (110)
- Rassegna stampa (75)
- Note (24)
- Altro (112)

Navigatore News

<table>
<thead>
<tr>
<th>Preferiti</th>
<th>Agenzie</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSA</td>
<td>Agenzie</td>
</tr>
<tr>
<td>Politica</td>
<td>Categorie</td>
</tr>
<tr>
<td>Argomenti</td>
<td>Categorie</td>
</tr>
<tr>
<td>UNIVERSITÀ</td>
<td>Categorie</td>
</tr>
<tr>
<td>Arte, cultura, intrattenimenti</td>
<td>Argomenti</td>
</tr>
<tr>
<td>Sport</td>
<td>Argomenti</td>
</tr>
<tr>
<td>Lavoro</td>
<td>Argomenti</td>
</tr>
</tbody>
</table>
Navigator Extension Point

(a) ViewPart
- NavigatorView
  - Navigator Extension

(b) INavigationAreaItem
- getSelectionProvider()
- setFocus()
- getComposite()
- createPartControl()
- setContextMenu()
- getSelectedObjectName()
- getContext()
- refresh()

Extension Element Details
- ID*: it.ansa.one.gui.ui.navigator.category
- buttonLabel*: %category
- tooltip*: %categorieTooltip
- Icon*: icons/24_categorie.png [Browse...]
- SmallIcon*: icons/16_categorie.png [Browse...]
- Item*: it.ansa.one.gui.ui.views.i [Browse...]
Gallery Viewer

- We needed to have a common interface to interact with the gallery and the title view from the Navigator
  - In the title view, we use the JFace TableViewer
- Nebula Project provides a tree viewer based on the gallery widget, but:
  - it does not support the virtualization
  - it manages a tree structure where photos can be only leaves of the tree
Gallery Viewer

StructuredViewer
(EclipseRCP3.3.2.org.eclipse.jface.viewers)

Gallery
(Nebula.org.eclipse.nebula.widgets.gallery)

GalleryViewer
- group: GalleryItem
  - gr: NoGroupRenderer

VirtualManager
Demo

Usa questo pannello per fare il login o per configurare il tuo account.

**Login Option**

**Autenticazione**

**Username:**

**Password:**

- [Recupera password](#)
- [Richiedi una Username e Password per accedere ad una Agenzia](#)
- [Reset codice postazione](#)
Conclusions

• We developed ONE Client using Eclipse RCP technology with good performance and, in the first test phase, with user’s satisfaction.

• Some problems:
  - on Mac-OS X platform, we must use Java 5.0 because Eclipse still doesn’t work with Java 6.0
  - very “poor” SWT browser API
    - debug and maintenance problems with JavaScript interaction to support different browsers
  - expected bugs in Nebula Project widget that we fixed or worked around (it is an incubator project yet!)
Questions?
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