



# The Virtual Unified Office VUO

Fulvio Bille'

[fulvio.bille@elettra.trieste.it](mailto:fulvio.bille@elettra.trieste.it)

Authors: Fulvio Bille', Daniele Favretto, Roberto Pugliese, Michele Turcinovich



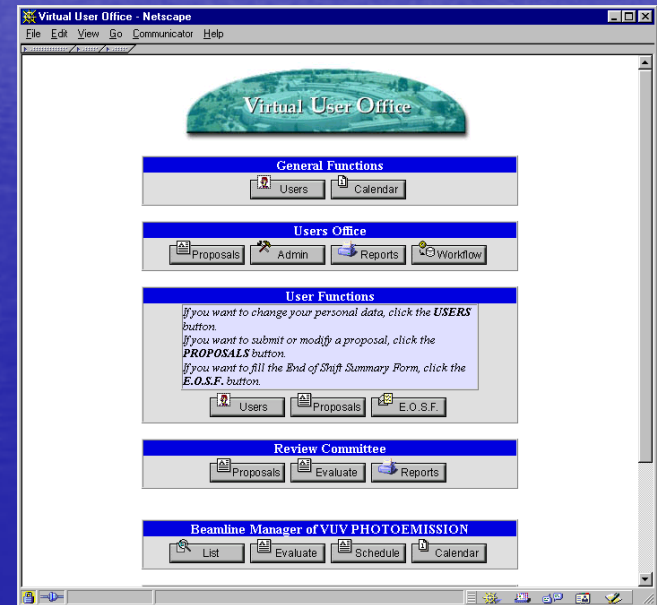
# Agenda

- History
- Technology
- Some applications
  - Proposal for applications beamtime
  - Access requests
  - ...



# History

- First release:  
"Computerization of the Users' Office".
- The VUO is working since 1997 with all the history of beamtime applications.
- The initial platform was: Oracle8 on Window NT







# The VUO platform technology

- Linux (Scientific Linux)
- Oracle 9i → 11g
- Apache + modplsql → mod\_owa
- PL/sql
- Python
- Java







# The technology: iuulib

- Allow automatic composition of the html form starting from a simple SQL select.
- List of values, javascripts checks, comments ... are defined in a separate support

**Document: 20060110/AF/F0108**

Edit the document protocol

Protocol number	20060110		
Direction (In/Out)	Outbound <input type="button" value="v"/>		
Signer acronym	AF - Alfonso Franciosi <input type="button" value="v"/>		
Executive editor	Abad Jose Lopez - borsisti st - F0108 <input type="button" value="v"/>		
Protocol date (dd/mm/yyyy)	15/02/2006		
Document date (dd/mm/yyyy)	15/02/2006		
Shipping/receiving date (dd/mm/yyyy)	16/02/2006		
Subject	Ciaoodi dihgisigp		
Sender reference protocol	<input type="text"/>		
External signer	<input type="text"/>		
Shipping method	Posta ordinaria <input type="button" value="v"/>		
Number of attachments	5		
Sender/Recipient	A. Menarini S.r.l.		<a href="#">[Search]</a>
Protocoller	TURCINOVICH Michele		



# The iuulib

- First version was in Pl/sql
- Now we have the java version

**Document: 20060110/AF/F0108**

Edit the document protocol

Protocol number	20060110		
Direction (In/Out)	Outbound		
Signer acronym	AF - Alfonso Franciosi		
Executive editor	Abad Jose Lopez - borsisti st - F0108		
Protocol date (dd/mm/yyyy)	15/02/2006		
Document date (dd/mm/yyyy)	15/02/2006		
Shipping/receiving date (dd/mm/yyyy)	16/02/2006		
Subject	Ciaoodi dihgisigp		
Sender reference protocol			
External signer			
Shipping method	Posta ordinaria		
Number of attachments	5		
Sender/Recipient	A. Menarini S.r.l.		[Search]
Protocoller	TURCINOVICH Michele		



# The iuulib

OraEdit PRO - [vu@users4]

Database Source Debug Version Control Edit Tools SQL Library Favorites View Window Help

New1 table vu@col\_comments

	TABLE_NAME	COLUMN_NAME	COMMENTS
1	ACCESSES	ARRIVAL	label="Arrival date at Trieste <1>(dd/mm/yyyy)</1>
2	ACCESSES	ARRIVAL_DATE_TIME	label="Preferred arrival date and time <1>(dd/mm/yyyy)
3	ACCESSES	BML_NAME	label="Beamline/Laboratory"
4	ACCESSES	DEPARTURE	label="Departure date from Trieste <1>(dd/mm/yyyy)
5	ACCESSES	DEPARTURE_DATE_TIME	label="Preferred departure date and time <1>(dd/mm/yyyy)
6	ACCESSES	PROP_ID	label="Proposal code/Project"
7	ACCESSES	STATUS	Label="Request status",List="select code, description"
8	ACCESSES	SUBMISSION_DATE	label="Submission date"
9	ACCESSES	USER_TYPE	label="Access request type",List="select code, description"
10	AGREEMENTS	BEAMLINE	Label="Beamline",List="SELECT name a, name b FROM"
11	AGREEMENTS	BEGIN_DATE	Label="Begin date (<1>dd/mm/yyyy</1>)",Script="if(c"
12	AGREEMENTS	DESCRIPTION	Label="Description",TextArea="cols=40 rows=5 wrap"
13	AGREEMENTS	DURATION_NOTE	Label="Duration note",text="size=52"

Ready

```
QueryForm:='SELECT id, in_out, acronyms, executiv
            doc_date, shipping_date
            ext_signer, shipping_type
            FROM prot_documents
            WHERE id= ' || FRM_ID;
```

```
iuulib.show_form(iuulib.frmTpEdit, 'prot_documents',QueryForm, 'Edit the document protocol',
                'protocols.edit_document');
```

## Document: 20060110/AF/F0108

Edit the document protocol

Protocol number: 20060110

Direction (In/Out): Outbound

Signer acronym: AF - Alfonso Franciosi

Executive editor: Abad Jose Lopez - borsisti st - F0108

Protocol date (dd/mm/yyyy): 15/02/2006

Document date (dd/mm/yyyy): 15/02/2006

Shipping/receiving date (dd/mm/yyyy): 16/02/2006

Subject: Ciaoodi dihgisigp

Sender reference protocol:

External signer:

Shipping method: Posta ordinaria

Number of attachments: 5

Sender/Recipient: A. Menarini S.r.l. [Search]

Protocoller: TURCINOVICH Michele





# Beamtime applications proposals

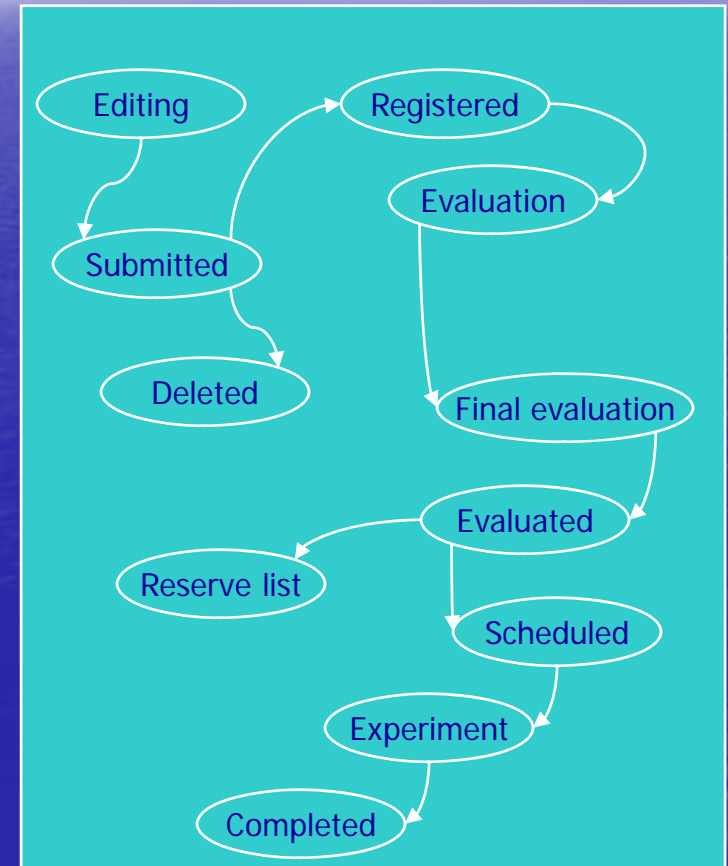
- This is the main section of the VUO
- Each semester the proposals are collected via internet and then the Scientific Committee select the bests, that will be scheduled on Elettra beamlines.
- The VUO allow the management of all the phases: collecting data via web, the evaluation and the scheduling of the beamtime applications.
- Users roles:
  - The proposer, that submits the proposals
  - The participant, that need to come to Elettra
  - The technical reviewer
  - The scientific committee
  - The users' office.





# Proposals: workflow

- The proposal workflow
  - submission
  - validation
  - Technical evaluation
  - Scientific evaluation
  - Scheduling
  - Closing (EOSF and experimental report)
- The workflow now is managed using a state machine







# VUO initial page

VUO - Virtual Unified Office - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Back Forward Reload Stop Home

Google Sincrotrone Trieste S... phone book Adam Beamwatch BACS users 4 VUO (official) VUO (root) Garzanti

Google Sincrotrone Trieste S... phone book Adam Beamwatch

**Synchrotron Light Laboratory**

«back to homepage»

VUO

Logged as: Michele TURCINOVICH (4828)

Please DO NOT USE the back and forward buttons of the browser

**Personal data**

If necessary update your [personal data](#)

The total number of [your publications](#) to the Publication Database is: 0 (0 validated/0 submitted)

**Your proposals**

The next deadline is February 28th, 2007

[Already submitted](#) proposals

[Submit the achievements](#) on a past proposal.

A brief textual report of the experiment results and information is necessary for EU supported proposals also to submit the "Experimental report"

[Submit an experimental report](#) on a past proposal.

More detailed information about experiment reports in rtf/pdf formats. (This report will be used for future proposals)

[Fill the EOSF](#) (End of Shift Summary Form)

**Projects**

[Matriculas](#) administration

[Institutes](#) administration

[My project ideas](#)

[All project ideas](#)

[My feasibility studies](#)

[All feasibility studies](#) (Officer only)

[All feasibility studies](#) (Management only)

[My projects](#)

GridSphere Portal - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Back Forward Reload Stop Home

http://testxen3.esce.elettra.trieste.it:8080/gridsphere/gridsphere?cid=splash

Google Sincrotrone Trieste S... phone book Adam Beamwatch BACS users 4 VUO (official) VUO (root) Garzanti

**Synchrotron Light Laboratory**

Welcome Administration Welcome to VUO

Home Personal Data Proposals Evaluation Users Calendar Access Requests Projects Publication Security Service Resource Booking Documents Protocol Visits Administration

**Registered Users:**

Enter your query

SEARCH Clear

[Search]

**Last proposals**

**Your last proposals:**

Proposal	Proposer	Title	shifts	Score
2006010	Michele TURCINOVICH	Prova 13		
2006009	Michele TURCINOVICH	Titolo 4		
2006013	Michele TURCINOVICH	dddddddddddddd		
2006014	Michele TURCINOVICH	Titolo 5		
2006015	Michele TURCINOVICH	Titolo 5		

**Last Publications:**

Authors	Description	Year	Status
gdgdj	fhdgjfsggdjgdgjsdgdgdj	2005	Submitted
K.Mašek,J.Libra,T.Skála, M.Cabala,V.Matolin,V.Cháb, K.C.Prince	SRPES investigation of tungsten oxide in different oxidation states	2006	Submitted
jj	dfkjagskdhsldkhg/sajl;l;	2000	Submitted
jj	dfkjagskdhsldkhg/sajl;l;		Submitted
gg	sfbzncngggggg		Submitted

September 26, 2006

**Frequently Asked Questions**

In case of problems or malfunctions check first if you are using a correct version of the browser (Mozilla 1.0)

vuo.elettra.trieste.it

## LDAP authentication





# Proposal submission



- Beamtime application is based on a wizard metaphor
- The user is guided during the whole submission process
- Proposal description/experimental report documents can be submitted both in rtf and pdf format
- The system performs many consistency checks both on the proposal and in the attached documents (title, proposal id, proponent, protection, number of pages, size, ...)

## • General information

The screenshot shows a Mozilla Firefox browser window displaying the GridSphere Portal. The address bar contains the URL http://testxen3.esce.elettra.trieste.it:8080/gridsphere/gridsphere?cid=proposals&gs\_action=showAdd. The page has a blue header with navigation links like Home, Personal Data, Proposals, Evaluation, Users, Calendar, Access Requests, Projects, Publication, Security Service, Resource Booking, Documents Protocol, and Visits. Below the header, there's a section titled "Proposals" with links for "Edit Navigation Message" and "Create Help". A message states "Proposal Submission require the following steps:" followed by a numbered list: 1. General Information, 2. Sample Description, 3. Local contact and participants, 4. Proposal Description. There are two form sections: "Proposal Title" with a text input field containing "Title of the application beamtime", and "Proposal Objectives (min 30 characters)" with a text area containing repeated text "Objectives, the objectives, the objectives...". At the bottom, there's a "Proposal Category" section with a dropdown menu set to "General user", and two checkboxes labeled "Collaboration with Industry" and "EU Support Requested", both currently unchecked. The status bar at the very bottom says "Done".





# Proposal submission

## ● Safety form submission

VUO - Edit Sample Description - 2006016 (Development) - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Back Forward Reload Stop Home

https://users4.elettra.trieste.it/pls/root/vusers\_safety.show\_edit\_safetyinfo?PROPID=2

Google Sincrotrone Trieste S... phone book Adam Beamwatch BACS users 4 VUO (official) VUO (root) Garzanti

**VUO - Edit Sample Description - 2006016 (Development)**

Logged as: **Livio RUSSOLI** (12299)

[Home/ Proposals/](#)

Proposal Submission require the following steps:

1. General Information
2. **Sample Description**
3. Local contact and participants
4. Proposal Description

**Edit Safetyinfo**

**Sample(s) and chemical substance(s) to be used in this experiment**

*If no data sheet is available give detailed information about samples and chemical substances to be used in the experiment*

Substance:

CAS registry number:

Supplier:

Chemical formula:

Physical state:

*If not in previous list leave blank the selection and specify here*

Other physical state:

Size (in mm<sup>3</sup>):

Mass (in mg):

**Diffraction proposals only please specify:**

Surface area (in mm<sup>2</sup>):

Space group (if known):

Unit cell dimensions at:

T:

alpha=  beta=  gamma=

Sample container (capillary, flat plate, pressure cell, etc.):

**Safety aspects**

*If the category of the substance is Gas please specify:*

Volume of cylinder to be used (in cm<sup>3</sup>):

Pressure of gas in cylinder (in mbar):

Done

users4.elettra.trieste.it





# Proposal submission

Participant and local contact

VUO - Edit Proposal - 2006016 (Development) - Mozilla Firefox

Back Forward Reload Stop Home [https://users4.elettra.trieste.it/pls/root/vusers.add\\_participants](https://users4.elettra.trieste.it/pls/root/vusers.add_participants) Go

Google Sincrotrone Trieste S... phone book Adam Beamwatch BACS users 4 VUO (official) VUO (root) Garzanti

**Synchrotron Light Laboratory**  
[back to homepage](#) [site map](#) [search](#) [links](#)

---

**VUO - Edit Proposal - 2006016 (Development)**

Logged as: **Livio RUSSOLI** (12299)  
[Home/ Proposals/](#)  
 Proposal Submission require the following steps:  
 1. General Information  
 2. Sample Description  
 3. **Local contact and participants**  
 4. Proposal Description

Participants (have to be already registered)	
Participant	Institute
<a href="#">[Delete]</a> (998) ACHARYA Ravi	University of Bath - Dept. of Biology and Biochemistry
<a href="#">[Delete]</a> (4806) ACCETTULLI Annamaria	Sincrotrone Trieste S.C.p.A.
<a href="#">[Delete]</a> (6655) ABBATE Francesco	Universita di Firenze - Dip. di Chimica

[\[Add participant\]](#)

Local contact  
 MORGANTE Alberto

[\[Save & Continue\]](#) [\[Delete this Proposal\]](#)

---

© 1998 - 2006 Elettra -- VUO 1.5 -- [VUO contacts](#) -- [Privacy policy](#)

[phone book](#) [contact us](#) [disclaimer](#) [webmaster](#)

Done users4.elettra.trieste.it



# Proposal submission

• Upload description file

VUO - Edit Proposal - 2006016 (Development) - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Back Forward Reload Stop Home

https://users4.elettra.trieste.it/pls/root/vusers.show\_edit4\_proposals?PROPID=2006016

Google Sincrotrone Trieste S... phone book Adam Beamwatch BACS users 4 VUO (official) VUO (root) Garzanti

**elettra** Synchrotron Light Laboratory

back to homepage site map search links

**VUO - Edit Proposal - 2006016 (Development)**

Logged as: **Livio RUSSOLI** (12299)

[Home/ Proposals/](#)

Proposal Submission require the following steps:

1. General Information
2. Sample Description
3. Local contact and participants
4. **Proposal Description**

Proposal Description have to follow the Elettra Proposal Description Template. In order to submit the Proposal Description:

- a. [Download here the Elettra Proposal Description Template for proposal 2006016](#) (RTF format).
- b. Prepare the document using the downloaded Template.
- c. Select the file and press the upload button. Accepted formats are RTF (preferred) and PDF.

Current Uploaded File		
Filename	View	Delete
2006016.pdf		

Use the "View" button to verify if the conversion process run successfully.

[\[Save in editing status\]](#)

[\[Check & definitely submit this Proposal\]](#) [\[Delete this Proposal\]](#)

© 1998 - 2006 Elettra -- VUO 1.5 -- [VUO contacts](#) -- [Privacy policy](#)

phone book contact us disclaimer webmaster

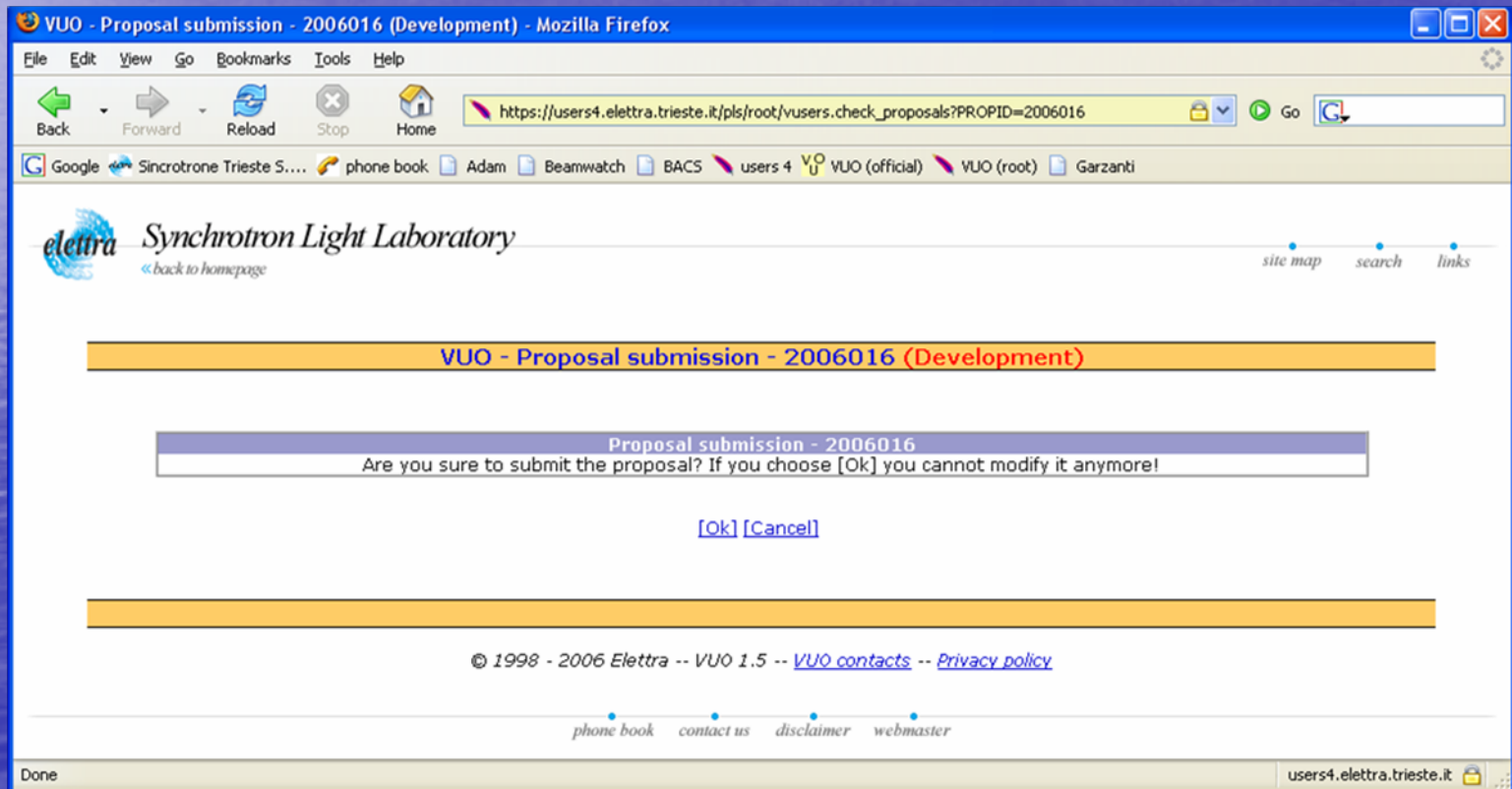
Done

users4.elettra.trieste.it



# Proposal submission

• Finally saving







# Document transformation

- The system has a document transformation engine based on OpenOffice (the old version use Ted)
  - Allow transformation from .rtf (possible also from other format like .doc, .odt) to PDF or to ASCII



- Export tables in csv format to allow the Users' Office autonomous handling of the data (statistics ...)



# The Reviewer Perspective: usability

- We have studied the navigation (count the clicks) to accomplish the evaluation in order to make the process faster

The screenshot displays the VUO - Virtual Unified Office web interface. The browser window title is 'VUO - Virtual Unified Office - Mozilla Firefox'. The address bar shows the URL: [https://vuo.elettra.trieste.it/pls/vuo/luu\\_evaluations.show\\_add\\_scientific\\_evaluation](https://vuo.elettra.trieste.it/pls/vuo/luu_evaluations.show_add_scientific_evaluation). The page header includes the 'elettra Synchrotron Light Laboratory' logo and navigation links like 'site map', 'search', and 'links'. The main content area is titled 'VUO - Virtual Unified Office' and shows the user is logged as 'Michele TURCINOVICH (4828)'. Below this, it indicates the 'Review committee: A'. The 'Proposals list' table shows the following data:

Proposals list	Evaluated:	Not evaluated:	Total:
	0	21	21

The table lists various proposal numbers (e.g., 2006520, 2006541, 2006545, 2006550, 2006553, 2006555, 2006562, 2006576, 2006580, 2006587, 2006598, 2006599, 2006684, 2006688, 2006740, 2006783, 2006796) with a 'Goto' link for each. The detailed view for proposal 2006520 shows the following information:

**Proposal**

Proposal Number: 2006520  
 Proposal Title: Final state structure in the photoelectron spectra of volatile lanthanide complexes

**Proposal requirements**

	Data
Requested committee	A - Atoms Molecules and Plasmas
Requested beamline	GASPHASE
Requested alternative beamline	-
Requested shifts	36
Application Category	Normal

**Proposal evaluation**

**Technical & Scientific evaluations**

Technical evaluation: Feasible with the ARPES endstation equipped with a proper oven. The requested number of shifts is justified by the broad range of planned measurements, however due to the high demand for beamtime 24 shifts are recommended.

Feasibility: Feasible  
 Beamline: GASPHASE  
 Suggested shifts: 36

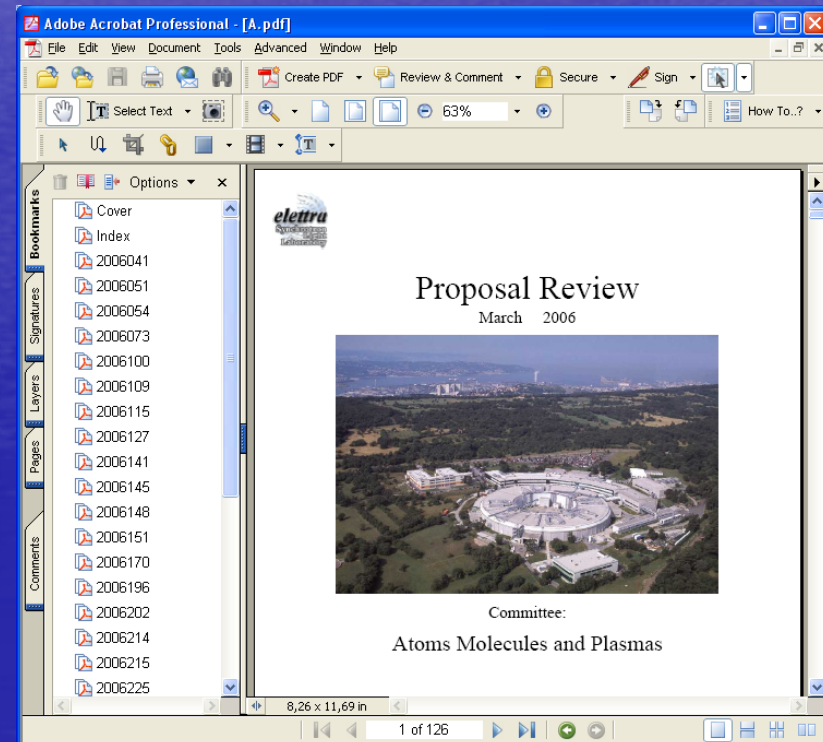
Average score: \_\_\_\_\_





# The Reviewer Perspective: the book of the proposals

- PDFbook
  - The reviewer need to work also off-line so need a single file with all the information necessary to evaluate the proposal
  - A java application makes a book in PDF format for each scientific committee using all the description files and some data extracted from the database. All is completed adding cover and index.







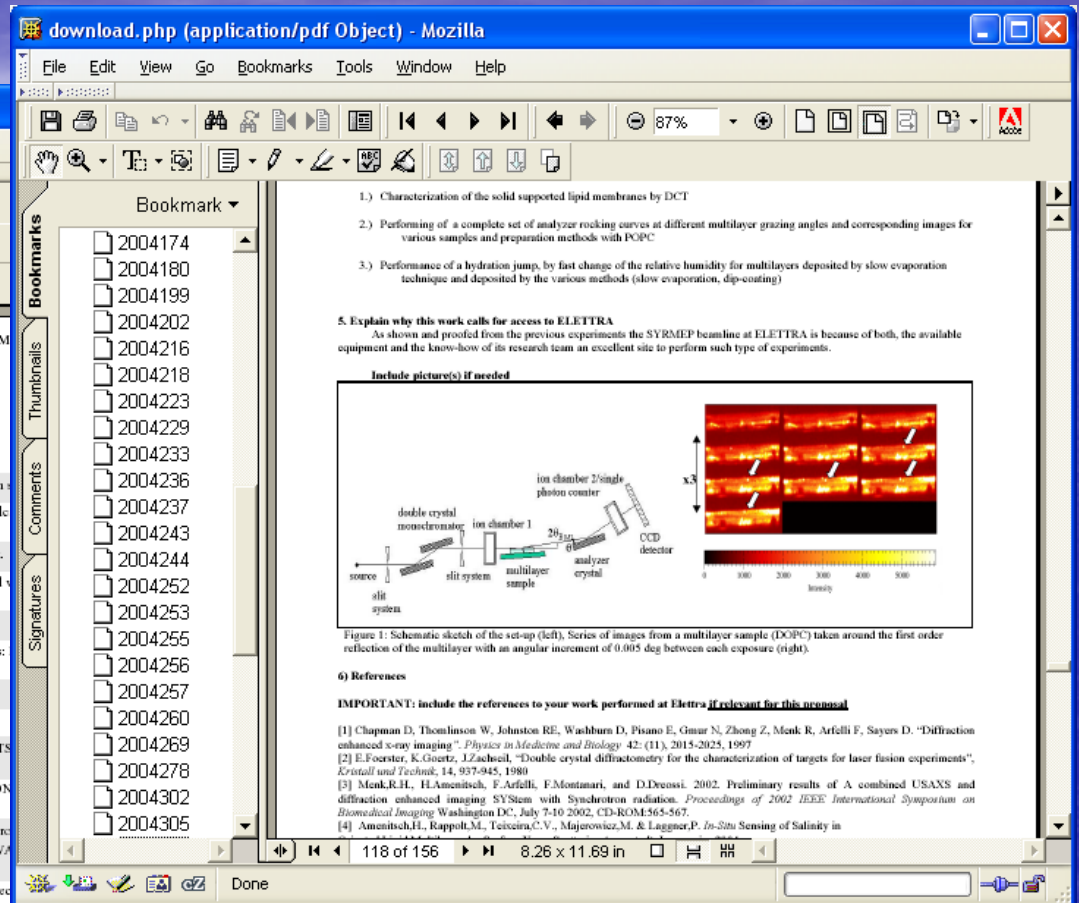
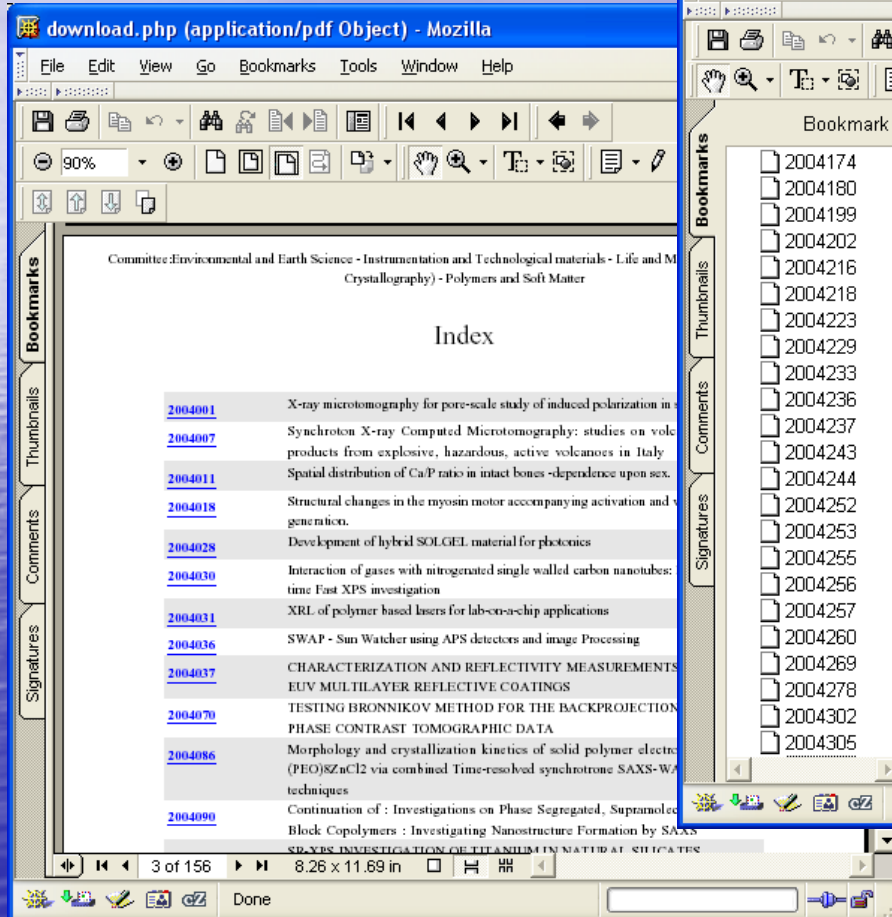
# PDF books



- Using the java technology "iText" the books are created automatically:
  - From database we get the list of proposals for a specific committee
  - We create the cover
  - We make the index (taking into account the number of pages of each document)
  - We join all the documents scaling them to fit the page
  - We generate the new page numbers
  - We create the back cover
  - The book is then published and available for download

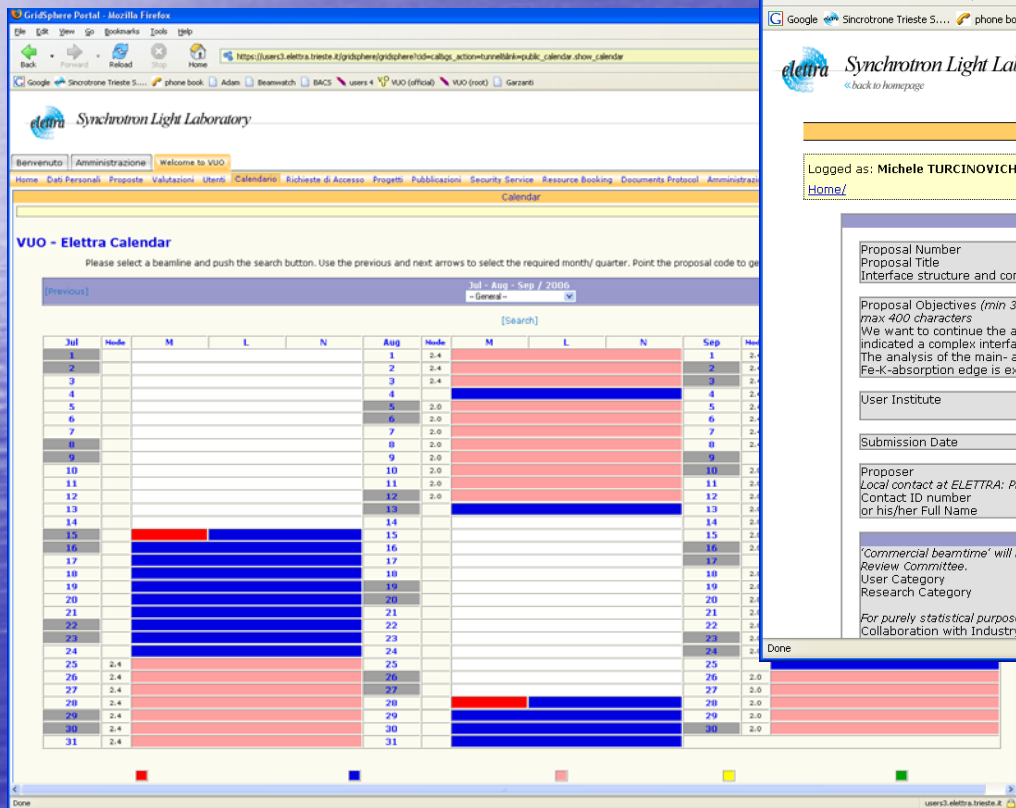


# PDF book for reviewers





# Schedule calendar



**VUO - View proposal (2006083)**

Logged as: **Michele TURCINOVIČ (4828)** [Create Help](#)

[Home/](#)

**View Proposal**

Proposal Number: 2006083  
 Proposal Title: Interface structure and composition of the ZnO/Fe(110)-tunneling magnetoresistance junction

Proposal Objectives (min 30 characters)  
 max 400 characters  
 We want to continue the analysis of the ZnO/Fe(110) interface. Our previous experiments (2005537) have indicated a complex interface structure. A mixed incommensurate (modulated) Zn(Fe)-ad-layer is found. The analysis of the main- and satellite reflections and their wavelength dependence across the Fe-K-absorption edge is expected to allow the development of a detailed structure model.

User Institute: (8736) Max Planck Institut für Mikrostrukturphysik GERMANY

Submission Date: 23/02/2006

Proposer: (14928) MEYERHEIM Holger L.  
 Local contact at ELETTRA: Please specify the Contact ID number (940) MORGANTE Alberto  
 or his/her Full Name

**Proposal Category**  
 'Commercial beamtime' will be subject to charge, will be considered confidential and will not be evaluated by the Review Committee.  
 User Category: General user  
 Research Category:  
 For purely statistical purposes please specify if your research is done in collaboration with industrial companies  
 Collaboration with Industry: No

Done








# Access request

- The user submit its access request on-line, removing a lot of paper/faxes ...
- This allow to fill automatically the database for the EU funded access under the IA-SFS FP6 project.

SINCROTRONE TRIESTE S.C.P.A. Users' & European Relations Service S. S. 14, Km. 163.5 in AREA Science Park I-34012 Basovizza TS E-mail: <a href="mailto:usersoffice@elettra.trieste.it">usersoffice@elettra.trieste.it</a> Fax: +39.040.375.8565	
PERSONAL AND FISCAL DATA FORM	
Experiment proposal code:	
Beamline:	
Personal Profile	
Title (Dr/Prof)	
Family Name	
Name	
Home Address	
Tax Payer's Code N. (mandatory)	
Other Address	
Phone	
Nationality	
Date and Place of Birth	
Gender (M or F)	
New User (Y or N)	
Research Status <sup>i</sup>	
Scientific Background <sup>iii</sup>	
Organisation Profile	
Institution/Company	
Department	
Street Name and N. (or PO Box)	
Post Code	
Town	
Country	
Phone	
Fax	
E-Mail	
Legal status of the Home Institution <sup>v</sup>	
Passport Data	
Passport N. (please enclose a photocopy of the document)	
Issued at	
Date	
Expiration	



# Access request workflow

- The user submit an access request.
- The system sends an e-mail to the "User office" 
- The UO checks the request 
- The system sends back an e-mail to the user to confirm that the request is accepted. 
- A PDF form is created for printing for the administration office

**Access request**

User type: General user [Help](#)

Proposal code: 2005002

Other proposal code (not in the above list):

Other (Project, Collaboration, ...):

Only if you have chosen "Other (Project, Collaboration, ...)", you must define the related beamline or laboratory.

Beamline:

Laboratory:

Arrival date (dd/mm/yyyy)

Departure date (dd/mm/yyyy)

**Access request to the Elettra laboratory**  
General user

Access request code: 2005002

Proposal code: 2005002

Other proposal code: 2005002

Other (Project, Collaboration, ...):

Beamline: 2005002

Laboratory: 2005002

Arrival date: 2005002

Departure date: 2005002

Personal Profile

Organization Profile

Document Data







## Other application: visits@ELETTRA






- The VUO portal is also used for other applications not strictly related to the beamline users.
- One of this application is the visit@ELETTRA that allow the public to request a visit to our campus
- The OpenVUO permission is based on the concept of role.
- All the people that have a role can do specific action.
- For instance for this application it is defined the "Visits manager" role that can view, modify, ... all the visit information.
- The "Visits manager" also can extract data using the csv format to make statistics.





## visit@ELETTRA workflow

- The user submit a request
- The system send an e-mail to all "Visit managers". 
- One "Visit manager" handles the requests, choose a guide and approve the visit 
- The system notify via e-mail to the visit responsible and to the guide(s) 





## Other sections...

- Publications
- Security hutch access: Keysafe
- Industrial proposals administration
- Customer relationship management (EOSF, FAQ, ...)
- Phonebook





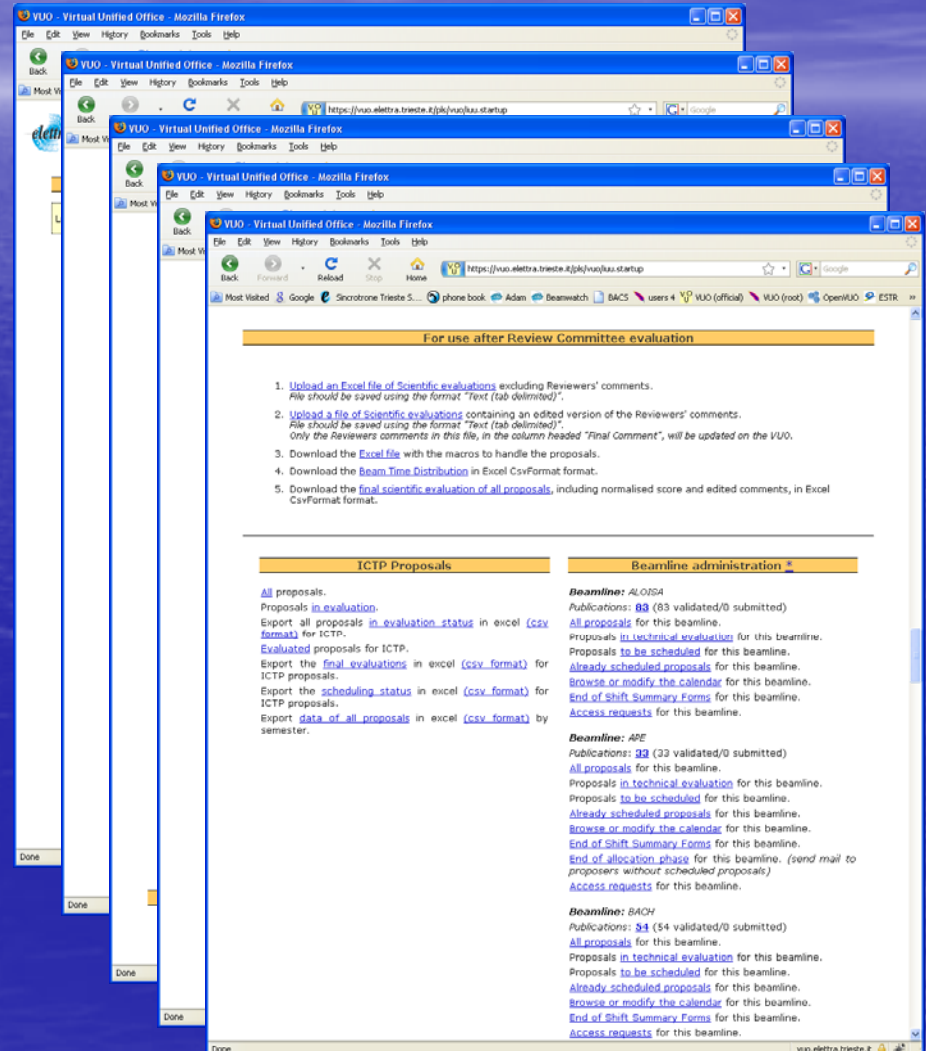
# Even other sections...

- Project management
  - Project idea
  - Feasibility Studies
  - Running Project → EU reporting
- Resource management
  - Rooms
- Document protocols
- Integration with company ERP (Zucchetti)





# Home and the big first page





# Conclusion

- The VUO is a stable web application running since '97.
  - Was the first U.O. web application for a synchrotron facility.
- This platform it is used also for many other internet/intranet applications
- The Sincrotrone Trieste uses an ERP to solve all the standard administrative, financial and human resource issues.
- On top of this the VUO solves all the Elettra specific IT issues, all the scientific business management tasks and integrate with the eScience platform.
- The VUO is so complex and connected to Elettra "life" that it is no so simple for us to move to other systems.