

*Giovanna Sissa*

*Osservatorio Tecnologico MIUR  
(Ministry of Education, University and Research, Italy )*

## **OPEN SOURCE SOFTWARE IN EDUCATION**

- The Hague, November, 18th 2004 -

## The Italian Framework for Open Source in PA

In 2003 a technical Committee for the “Ministero Innovazione Tecnologica” produced a “Survey about Open source software in Government”

In this survey an **important role of open source software in education was recognized**

Output of the Survey: Recommendations, proposed actions to be taken in terms of regulations, management aspects, support for Public Administrations

**“Value for money” is the policy for PA and school, at national level**

Some Region (i.e. Tuscany) adopt, at local level, specific policy for Open Source Software(OSS)

## The Italian Framework for Open Source at school

MIUR doesn't supply directly schools with any kind of software; **schools choose and buy their own software by themselves**

Each school (about 10.000 in Italy) is absolutely free to use the kind of software it wants: proprietary or free/open source

Most schools use proprietary software, but free software use is increasing.

- **6,9 % of italian schools have some Linux computer**
- **5,5 % of server are Linux server**

*The Figure shows the state of the art in October 2004*

## Use of Open source software at school

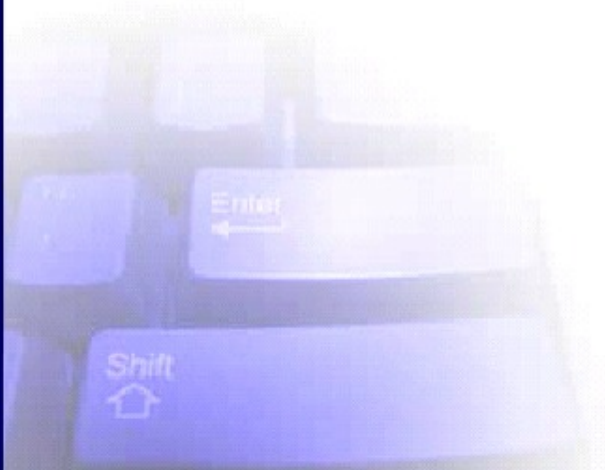
- The use of Linux operating system on server or web server Apache;
- The use of office automation suites (i.e. OpenOffice/StarOffice)
  - " Is it better to teach students to use products most requested by the "market" or free software that gives more competence, allowing to analyze how it works?"*
- The teaching of various subjects (i.e.: open source applications to teach physics o math);
- Computer science teaching for technical school students;
- Networking and on-line services

## Open Source is suitable for the education system

- It allows the students to learn more because they can better understand how computers and operating systems work;
- It widens the learning spectrum of the students promoting the creation of different skills;
- It makes possible to reuse obsolete hardware systems still available at school, thus helping to reduce the total cost for hardware and software;
- It allows more security.

## The Italian Policy for Open Source at school

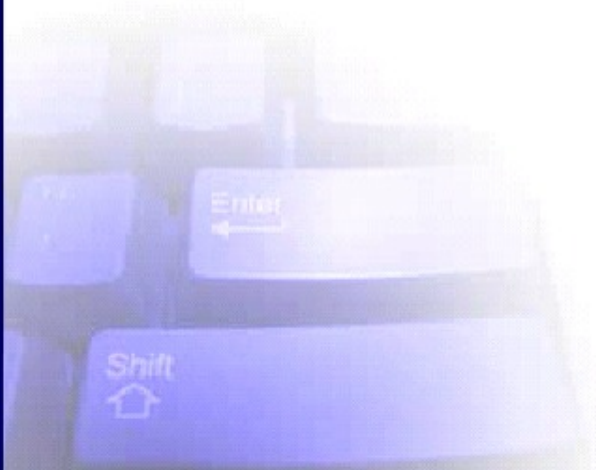
The **global policy** is “value for money”, but with a cultural interest for OSS



## The Italian Policy for software at school

MIUR try and promote some agreement with software company in order to decrease price for educational licence for school or to promote open source software.

For example, one year ago an agreement with Sun Microsystem gave all the Italian schools the opportunity to receive *free of charge* StarOffice 7.



## STAROFFICE Requests for geographic area

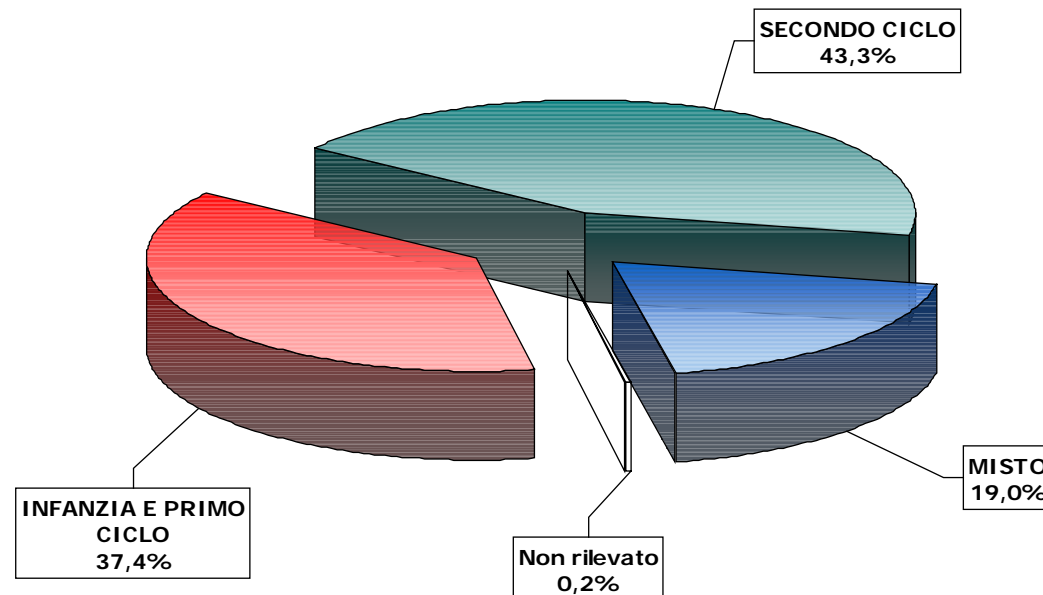
Total of requests: 3.113 (1.942 Secondary schools)

AREA GEOGRAFICA	TOTALE RICHIESTE	TOTALE ISTITUTI	%
CENTRO	794	2.619	30,3%
NORD	1.270	3.181	39,9%
SUD E ISOLE	1.049	4.990	21,0%
<b>TOTALE</b>	<b>3.113</b>	<b>10.790</b>	<b>28,9%</b>

Non sono compresi i dati della Regione Autonoma Valle d'Aosta e delle Province Autonome di Trento e Bolzano che non hanno scuole statali

## STAROFFICE Requests for kind of school

Total of requests: 3.113 (1.942 Secondary schools)



## The Italian Policy for Open Source at school

### Support for schools

**“Osservatorio Tecnologico” strongly focused on Open source and free software at school**

Supply schools with specific services to promote free software

## Osservatorio Tecnologico - *Identity* -

**A national web based service for all Italian school**

**Born** in the year 2000 and managed by the School Department of Liguria

**Financed** by the “Servizio Automazione Informatica e Innovazione tecnologica” of MIUR (Ministry of Education)

**Realized** by a community of teachers, researchers and ICT experts at national level

**Based** in Genova, at the University of Genova

## Osservatorio Tecnologico - *Mission* -

To promote technology transfer from ICT most advanced subjects (universities, research centre and companies) to school

*Up to date ICT in schools*

Osservatorio Tecnologico maintains and enhances **repositories of data, experiences and best practices of free/os software in school**

Support the Community of IT-administrators in schools to Free and Open Source Software migration

*<http://www.osservatoriotecnologico.it>*  
*<http://www.osservatoriotecnologico.it/en/>*



The screenshot shows the OTE website interface. At the top is the OTE logo with the text "osservatorio tecnologico". Below it is a "Web Services" section with a list of services: "Accessibility test", "On-line questionnaire", "Softwares test", and "Newsletter". There is a "Restricted Area" section with a "ForTIC" link and an Italian flag. At the bottom, there is a white box containing the text "Genova, 8 NOVEMBRE", "ORE 10 [Open source e sviluppo cooperativo la parola agli sviluppatori](#)", and "ORE 14:30 [Reti aperte e soluzioni](#)".

Osservatorio tecnologico is a web based service

Three main areas of interest:

# Osservatorio Tecnologico

## - Main areas -



**Web Services**

- Accessibility test
- On-line questionnaire
- Softwares test
- Newsletter

**Restricted Area**


ForTIC



Genova,  
8 NOVEMBRE


ORE 10  
[Open source e sviluppo cooperativo la parola agli sviluppatori](#)

ORE 14:30  
[Reti aperte e soluzioni](#)



SERVIZIO DI OSSERVATORIO  
MINISTERO DELL'ISTRUZIONE

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**SOFTWARE IN SCHOOL**  
*New trends in operating systems and programs*

**FREE SOFTWARE IN SCHOOL**  
For what purposes? An alternative option to be used also at school.

**OPEN STANDARDS AND LIBRE SOFTWARE IN GOVERNMENT**  
18th November, The Hague

**MIGRATION TOWARDS 'OPENSOURCE**

**RE-USE OF SOFTWARE**

**COSPA**  
Consortium for Open Source in PA: Osservatorio Tecnologico participates as Observer

**RASIS**  
Open networks and integrated solutions for school

**SPAIN: some projects involving OOS and P.A**  
Linex e Guadalinex

**PROJECT TEACHER**

## Software

# Osservatorio Tecnologico

## - Main areas -



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**PROJECT TEACHER**

**RETI LOCALI**

**LOCAL AREA NETWORKS**  
*Best Practices, new ideas and examples for school's local network*

**PRIVACY**  
Adoption of basic security means in school

**SECURITY**  
All issues on school LAN security

**COMPUTER SECURITY GUIDELINES**  
by Computer Automation and Technology Innovation Service

**WLAN**  
A "wireless" network

**SKILL SHORTAGE**  
The need for ICT trained personnel in school and society

**COMPUTER VIRUSES**  
The most dangerous and recurring menace

**SURVEY on COMPUTER NETWORKS in SCHOOLS 2002-03**

**ADSL**

## Local Area Network

# Osservatorio Tecnologico

## - Main areas -



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*Internet*

- <http://www.osservatoriotecnologico.it>-



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*Services for Open source software at school*



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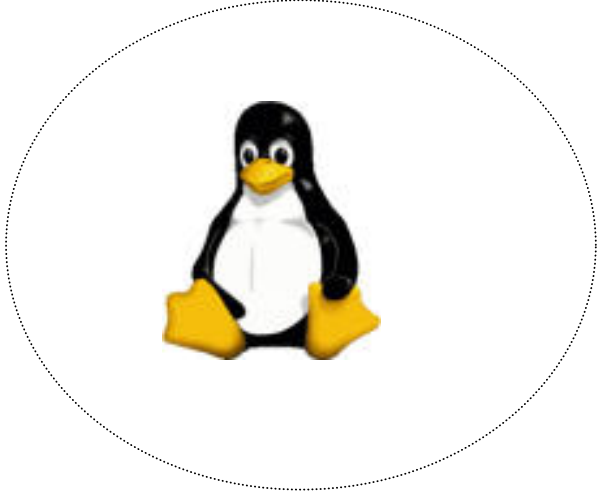
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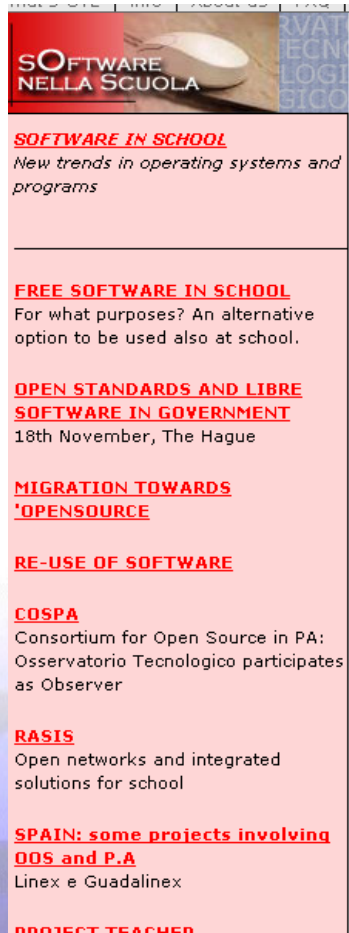
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# Osservatorio Tecnologico

## *Services for Open source software at school*



**Documents:** licenses, copyleft, OSS in administrations, open content, migration guidelines..

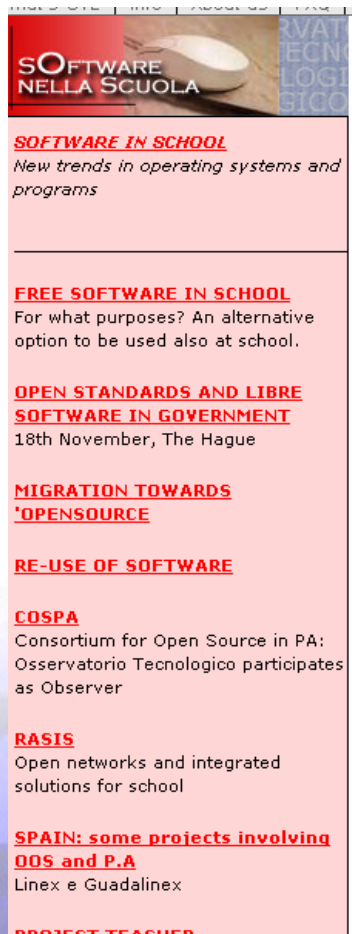
**Data:** on oss spread in Italian schools

**Best practices** on OSS in schools

**Reports about Free and Open Source software** (Linux distribution, OS application software,...)

## Osservatorio Tecnologico

### *Services for Open source software in schools*



- **Portability** tests among **documents** on **different suites** of Office Automation
- **Migration guidelines**
- **Reuse of free software**
- **International news**
- **International reference**

## Osservatorio Tecnologico and free and open source software

Osservatorio Tecnologico's activities are carried out on several aspects:

- OSS culture
- OSS technology
- Data collection and monitoring about Free and Open Source Software at school
- Best practices
- Licensing policy and Open content



### SOFTWARE NELLA SCUOLA

*Tendenze e novità relative al software di base ed applicativo di tipo generale*

### PORTABILITÀ DI DOCUMENTI TRA APPLICAZIONI

Test di portabilità tra suite di office automation.

### STAR OFFICE GRATIS

Siglato il protocollo d'intesa per la distribuzione gratuita di StarOffice ad oltre 10.700 scuole italiane.

### SOFTWARE LIBERO E "OPENSOURCE"

Storia, qualità, caratteristiche e sviluppo di un nuovo paradigma

### SOFTWARE LIBERO NELLA SCUOLA

Per quali utilizzi? Una possibile alternativa, anche a scuola

### GUIDA ALLA MIGRAZIONE VERSO L'OPENSOURCE

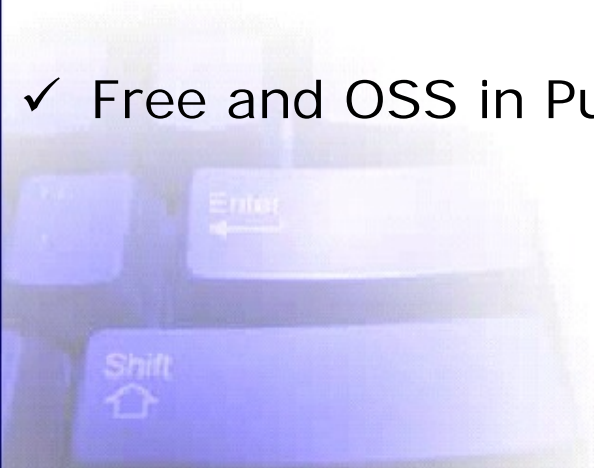
L'Interchange Data between Administrations (IDA) delinea guidelines per gli amministratori.

### GLOSSARIO OPEN SOURCE

## - *OSS culture* -

We collect, edit and publish information and news about:

- ✓ Free and Open Source Software general concepts (license policies, copyleft, open content,...)
- ✓ Free and OSS in schools
- ✓ Free and OSS in Public Administrations



## **- OSS technology-**

We try to investigate different software's technology aspects:

- Linux distributions (server and client side)
- Free and OSS application program
- OS productivity software
- Portability among documents on different suites of Office Automation

## Test on open source software



- ❖ Linux distributions
- ❖ OS Application software
- ❖ OS productivity software (mainly Office Automation suites)

*Tests of document's portability among suites of Office Automation*

## Test on open source software - *Linux distributions* -



- ❖ LINUX DEBIAN 3.0
- ❖ SUSE LINUX ENTERPRISE SERVER 8.0
- ❖ RED HAT
- ❖ MANDRAKE 9.0
- ❖ EDULINUX

## Open source software - *The report frame* -



- Description of the product
- Advantages/disadvantages
- Potential uses in school
- Report
  - Installation
  - Acquisition and starting procedures
  - System requirements
  - Installation troubles
  - On Line assistance

## Test on open source software - *Methodology* -



The tests are carried out by teachers with a relevant experience in the use of ICT in schools

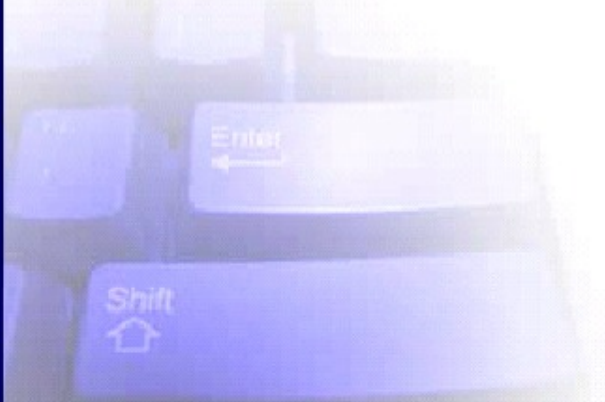
In the Osservatorio Tecnologico's laboratory we have recreated the same environmental conditions of a school-lab:

- *not "last generation" Hardware*
- *different software and settings*
- *different LAN's architecture*
- *different bandwidth*

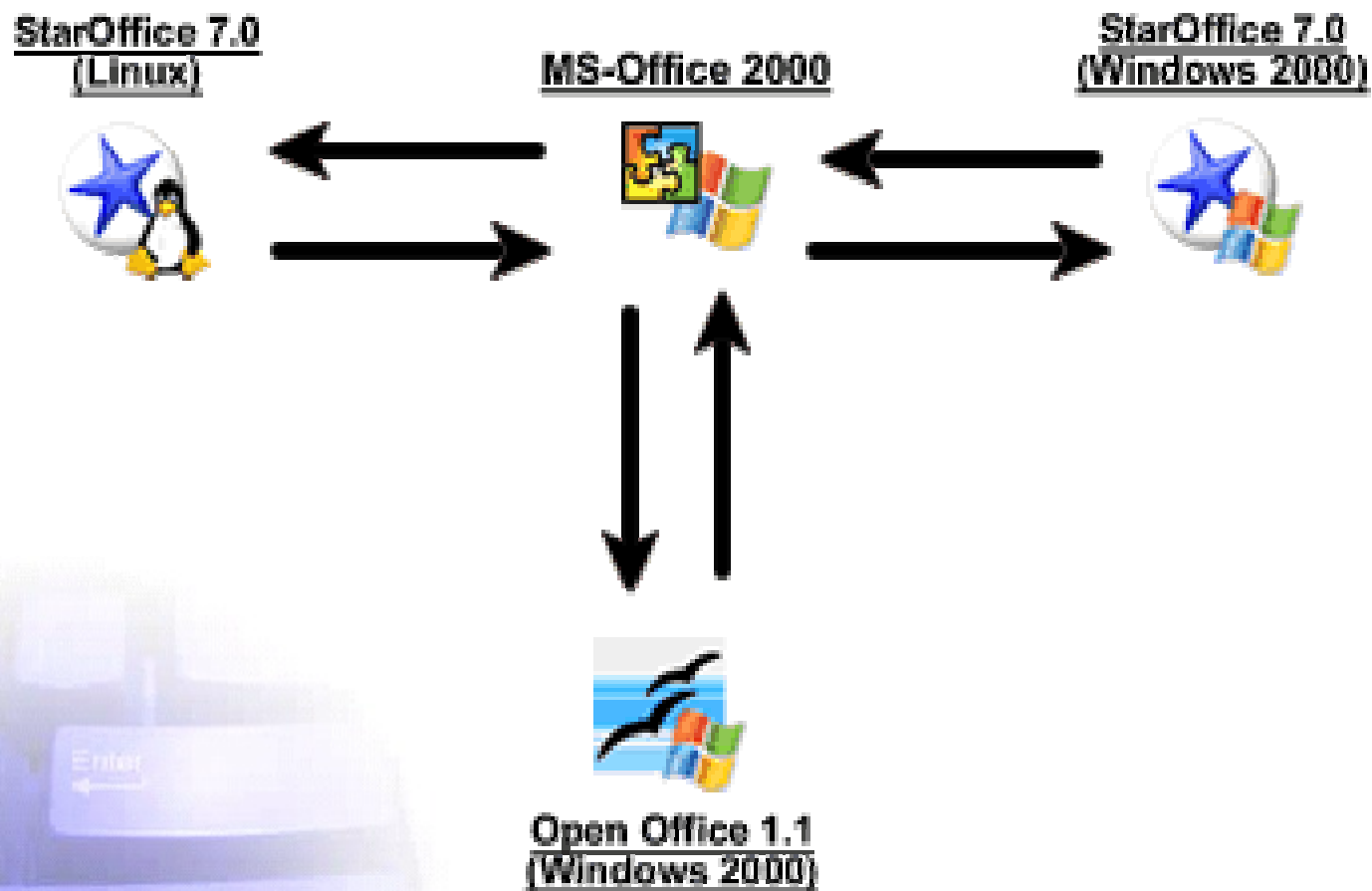


## Test on open source software - *Application Software* -

- ❖ STAR OFFICE 7.0 (2003)
- ❖ OPEN OFFICE 1.0.2 Italian version (2003)
- ❖ RDESKTOP



## *Portability among suites of Office Automation*



## - Open content -

Creative commons licenses can be suitable in order to:

**Implement knowledge sharing,  
and at the same time,  
guarantee reliability and originality of sources**

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Software nella scuola

- OpenSource e Software Libero
- OpenSource Scuola
- OpenSourceP.A
- Approfondimenti
- Licenze
- CopyLeft
- Open Content
- Organizzazioni
- P. A.
- Manutenzione
- Test di Applicativi
- Test di distribuzioni Linux
- Test di portabilità
- Glossari

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**Genova, Italy**

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