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# Japan OSS Promotion Forum Desktop WG report ( OSS Desktop deployment in educational sector )

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# Organization



# WG Objectives

- This WG shall promote deployment of OSS Desktop in Japanese IT market by solving issues on the deployment, in order for end-users to have multiple alternatives of Desktop IT solutions, and implement fair competition in the Japanese Desktop IT market.



# WG Activities

- **Set priorities to target segment where OSS Desktop solutions to be deployed.**
- **Analyze user requirements of the target segments.**
- **Identify gaps between user expectations and existing technologies and services, then propose solutions to meet with the critical user requirements.**
- **Propose governmental project for OSS Desktop promotion through Japan OSS Promotion Forum.**



# Strategies for OSS Desktop deployment

- **Focus on the segment where the target users have not locked-on a single proprietary technology**
  - Focus on Junior and Senior users
    - Provide friendly user interface for junior and senior
  - Focus on the usage scenario which co-existence with other platform is not mandatory
  - Focus on the segment which number of required applications is limited
- **Reduce maintenance cost / effort**
  - Minimize system customization for individual system
  - Automatic system update
  - Semi-Autonomic system recovery
- **Security enhancement**
  - Protection from erroneous user operation
  - Protection from malicious attack
  - Protection of privacy data



# User complaints against existing Desktop systems

## ❑ Too much effort is required for system maintenance including updates

- Frequently security updates are required.
- System trouble caused by applying security patches
- No central system management ( operation of system management must be done by each desktop system )
- Hard to distinguish which desktop system is up to dated and which is not.

## ❑ No good solution to protect desktop systems

- Hard to detect high-jacked client system
- Virus scan is high cost operation. ( Scanning time is too long )

## ❑ Need to operate under system administrator privilege

- Administrator privilege is required for system update and driver installation.
- Risk on system damage by erroneous operations

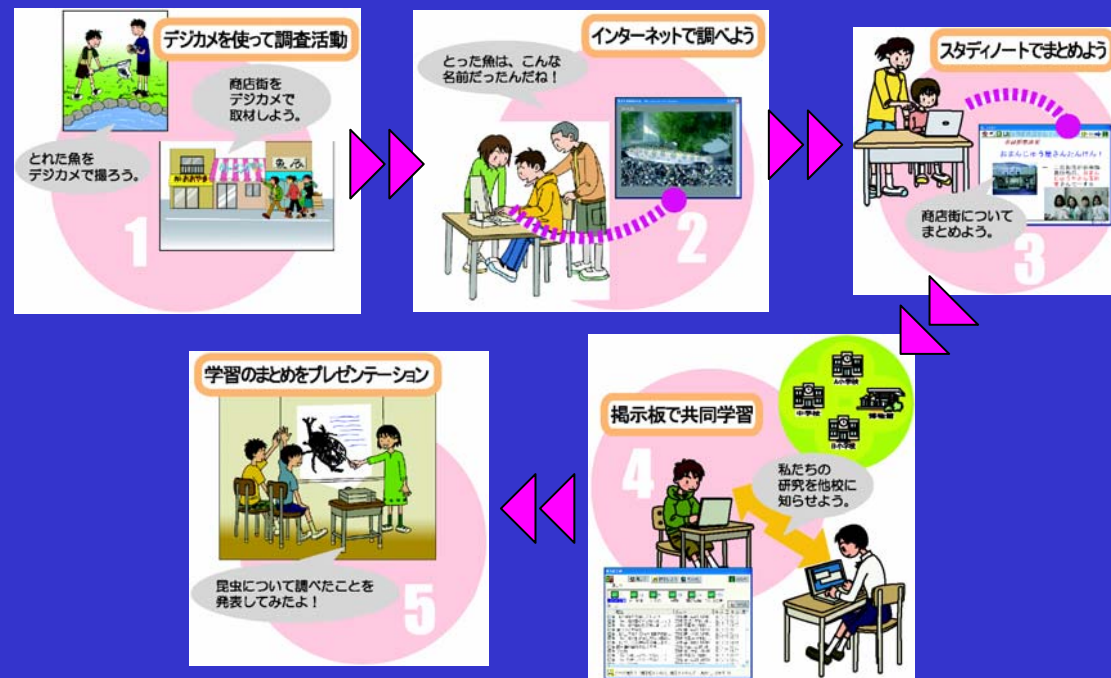


# IT usage in elementary school

- Information search through Internet
- Use of e-learning contents
- Multi-media study report
- Presentation
- Interschool collaboration via  
Sharing study report through contents database

E-mail

BBS





# Requirements from educational scene

- **Reduction of system maintenance effort**
  - Teachers need to perform system maintenance by themselves  
a teacher need to maintain 100 systems
- **Robustness ( for students' system )**
  - Student used to brake systems
  - Autonomic recovery is preferable
- **Data protection ( for teachers' system )**
  - Personal data of students ( Privacy data )
  - Examination questions ( Confidential data )
- **Low maintenance cost**
  - Support free is too expensive
- **User friendly interface and application for students**
  - Systems which enables inter-school cooperative study
  - Easy BBS and HP authoring tools
  - Easy Drawing and painting



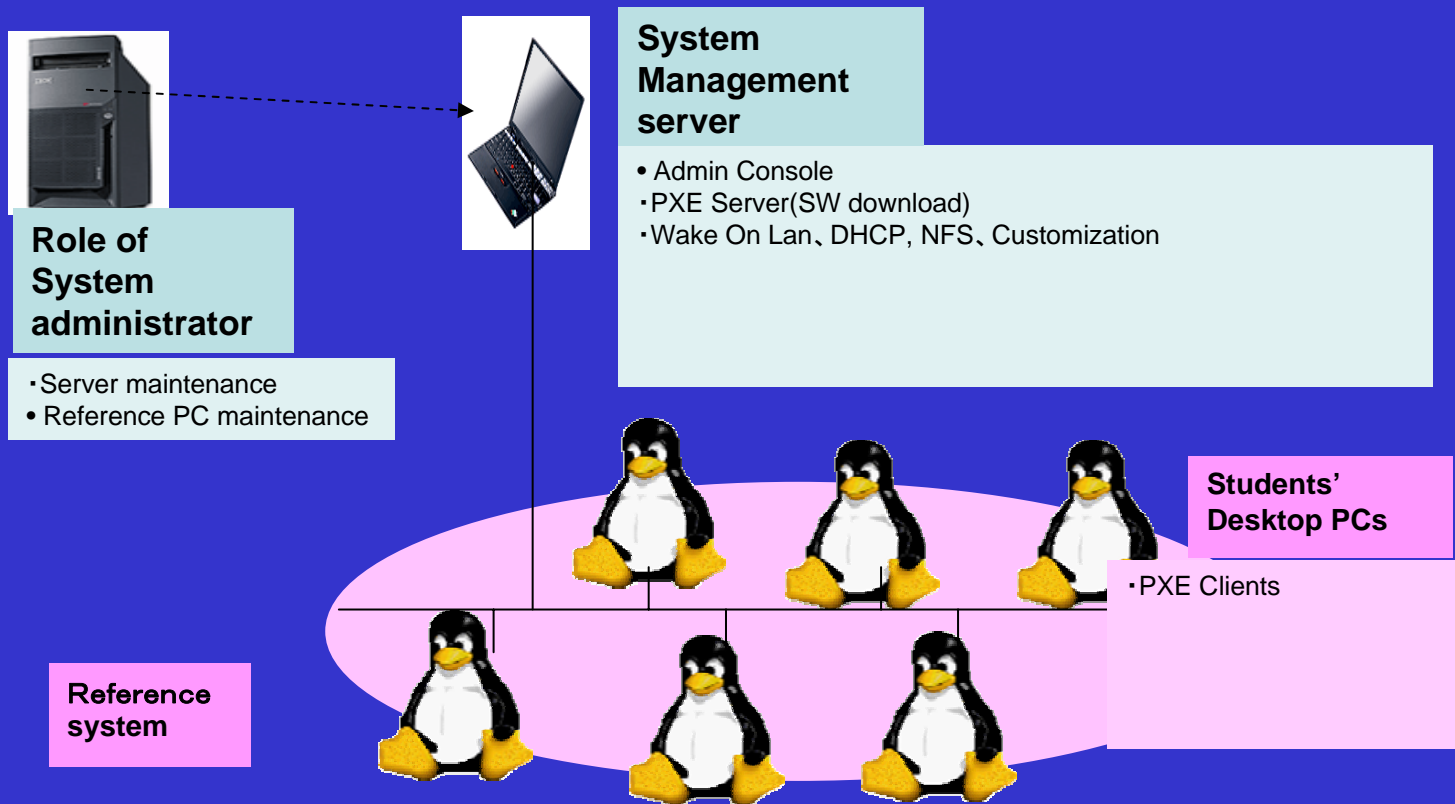
# User requirement analysis

- **Maintenance of students' system**
  - Hard to protect from students' erroneous operations
  - Students must have access to critical modules  
( Destroy and rebuild/recover is one of effective learning methodology )
  - Should enable (Semi-) Autonomic recovery rather than protection
    - Autonomic system recovery ( initialization ) during night time
    - One key system recovery ( initialization ) on demand
- **Maintenance of teachers' system**
  - Confidential or privacy data flow out is fatal in educational scene
  - Data / system protection must be essential than recovery
  - Security enhancement is necessary
- **Maintenance cost reduction**
  - Reduce on site support by using on-line support
  - Replace damaged system with backup system then send damaged system to support office
  - Recover software to initial image instead of treat against symptom



# Automated desktop system management

Restoring system image during night time by using Wake on LAN  
Automatic system image deployment from reference system



## Recommendations on deployment experimentation for educational scene

- Perform an experimentation of OSS Desktop deployment into educational scene.
- The experimentation should ensure that OSS Desktop can be used in real educational scene practically.
- The experimentation should address not only usability but also Robustness, maintenance-ability, cost effectiveness.
- The experimentation should address if OSS technology help teachers to reduce their system maintenance efforts.
- The experimentation should not depend on any particular distribution nor proprietary technology.



## Results of WG recommendations

- Japanese government kindly accepted recommendation on OSS desktop deployment experimentations for educational sectors, and started \$2.5M projects.
- Mitsubishi Research Institute is leading experimentation for elementary and junior high schools.
- IBM is developing a desktop system centered management system as an open source project.
- Argo21 and Business Search Technology are performing maintenance of OSS desktop systems.
- Turbo Linux and Sun Java Desktop are used in the experimentation.
- IBM ThinkPad and SOTECH WinBook are used in the experimentation.
- Alpha system is leading experimentation for high school and universities by using knoppix ( CD bootable Linux ) with educational contents.



## Action items to be addressed in 2005

- Continue to enhance deployment experimentations for educational sectors.
- Perform requirement analysis for public sectors.
- Start deployment experimentations for public sectors.
- Enhance Linux security for educational and public system use.
- Identify factors of a particular proprietary browser dependence of existing public services on the WEB.
- Develop some user friendly OSS applications for junior and senior use.



**THANK YOU!!!**

