Emerging Free Software market in Developing Countries

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TEDECO

POLITÉCNICA

- **Introduction**
  - TEDECO group
  - Free SW experience at Developing countries
  - Relation with Embedded Systems
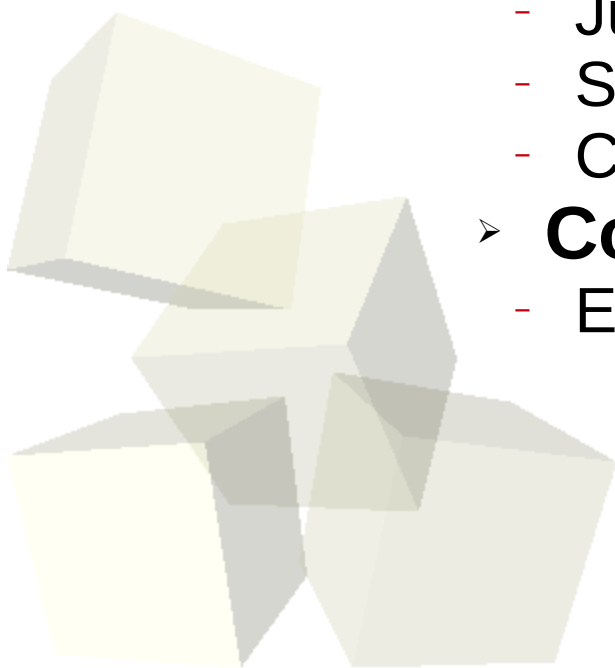- ***Free SW occidental market***
  - Mature market
  - Fighting against the tradition
  - New business models
- **Catalysts at developing countries**
  - Jumping over an old technology
  - SW in Institutional Strengthening
  - Cooperation influence in programming education
- **Conclusion**
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Birth date at UPM:
November 6, 2006

Madrid 6 de noviembre de 2006

Fdo. Jaime Cervera Bravo

*TEchnology for the
DEvelopment and the
COoperation*

New orientation for ICT research:
  Solving the problems of developing countries
Projects:
   TESON (2006-2007)
   TICAMEN (2008-2009)
   MESTUN (2010)

In 4 years: 34 members directly involved!
More than 100 people in our mail list

Diversity:
Professors
Students:
    Graduate
    Post-graduate
    PhD
Ext. collaborators

TEDECO guidelines:
    Look forward sustainable development
    ICT cooperation-oriented projects
    Free software development

Connectivity problems
   Solar panels
   Satellite connection
Economic problems
   Reusing technologies
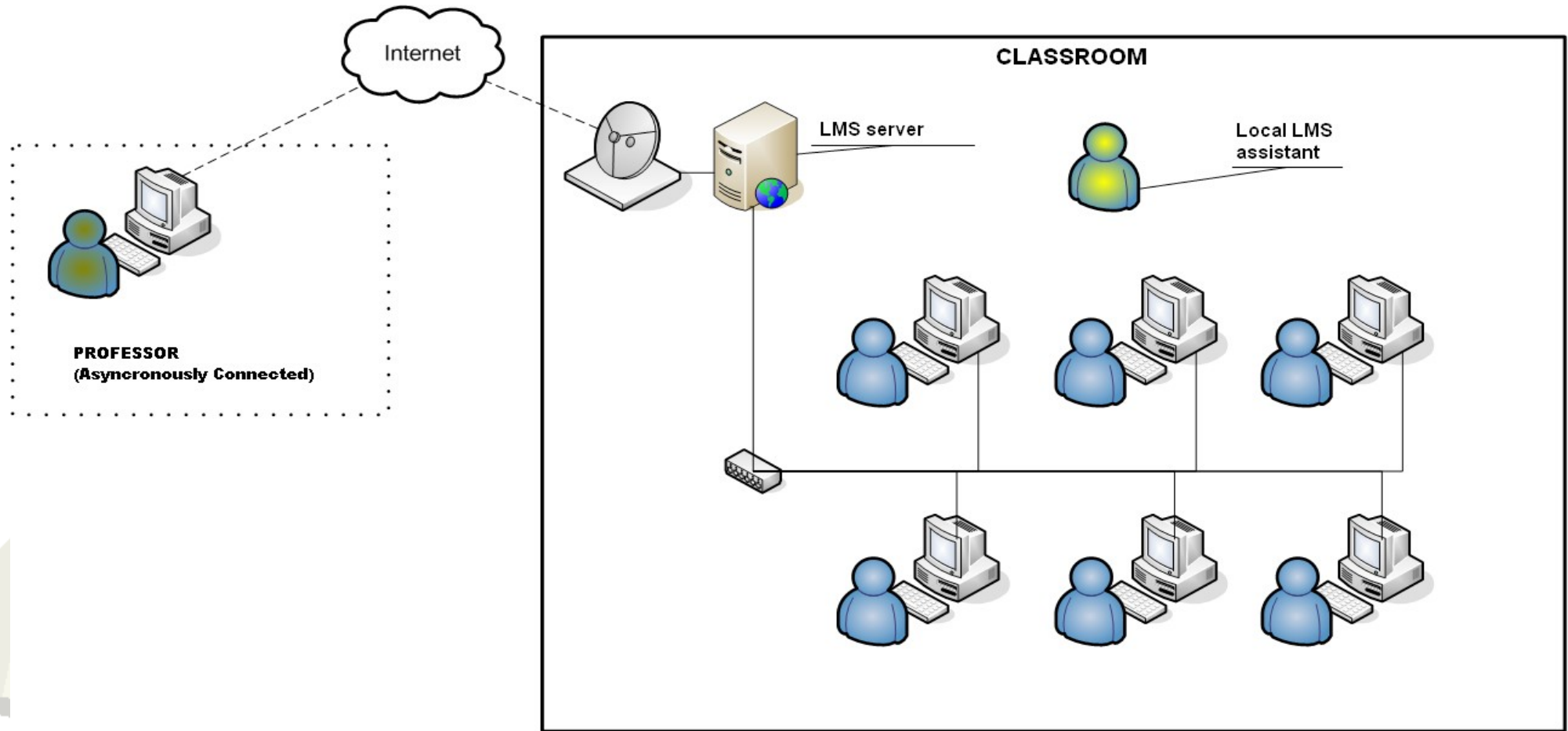   Adapting SW
   Green-IT
   e-Tourism
   e-Governance
Education problems
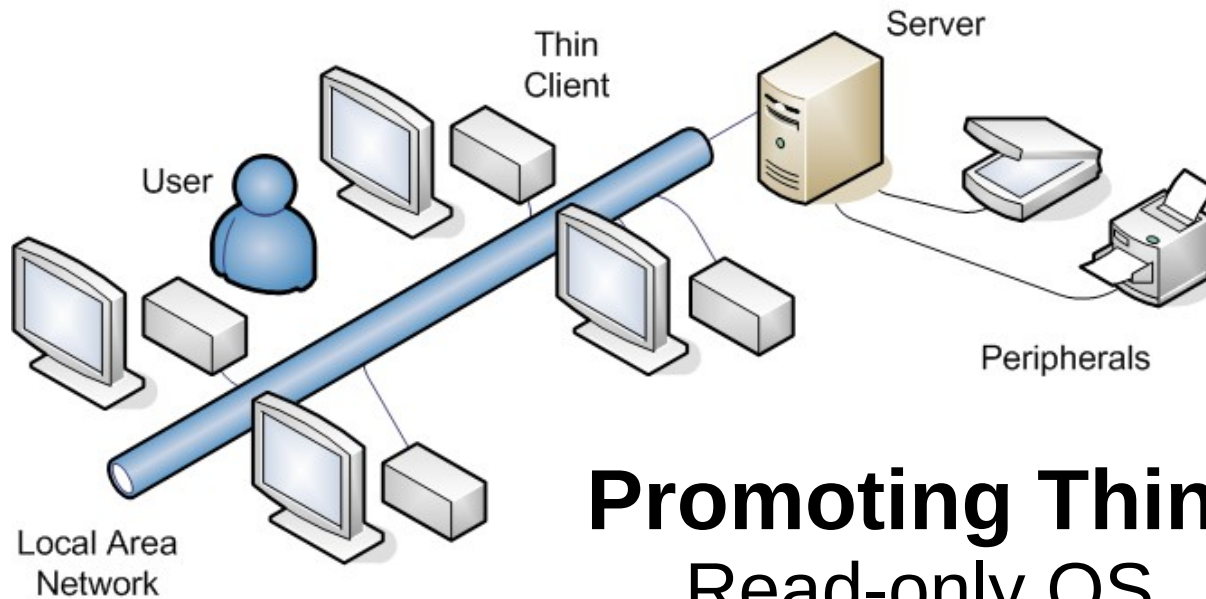   Designing studies plans
   Studying markets needs
   Adapting e-learning tools

e-learning extensions adapted to developing countries conditions

Promoting Thin Client technology
    Read-only OS
    Non-dependence on HD

Low and easy maintenance
    Using a built-in recovery software
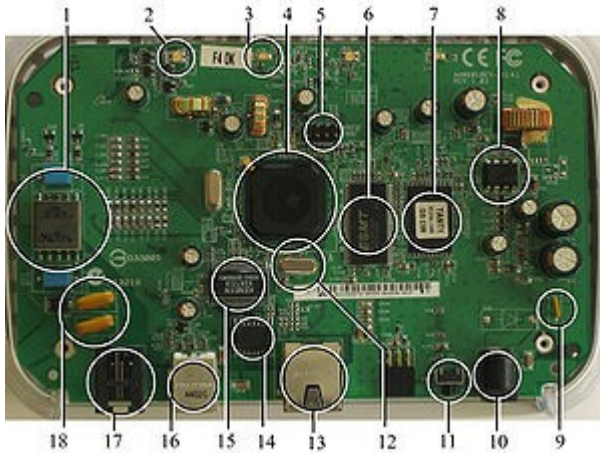
Remote support
    Optionally: local duplicated system
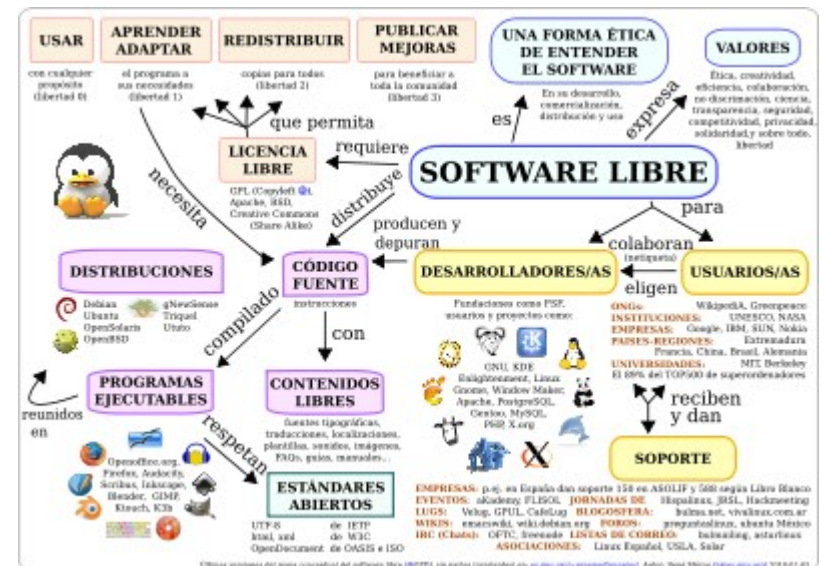
Low power consumption

> ➢ **Relation**
>   - Free SW vs Proprietary SW
>   - *Embedded Systems vs PCs*
> ➢ **Criteria**
>   - Reliability
>   - ➢ maintenance (e.g Thin Clients)
>   - ➢ industrial cases (e.g radio stations)
>   - Consume
>   - ➢ (e.g communication repeaters)

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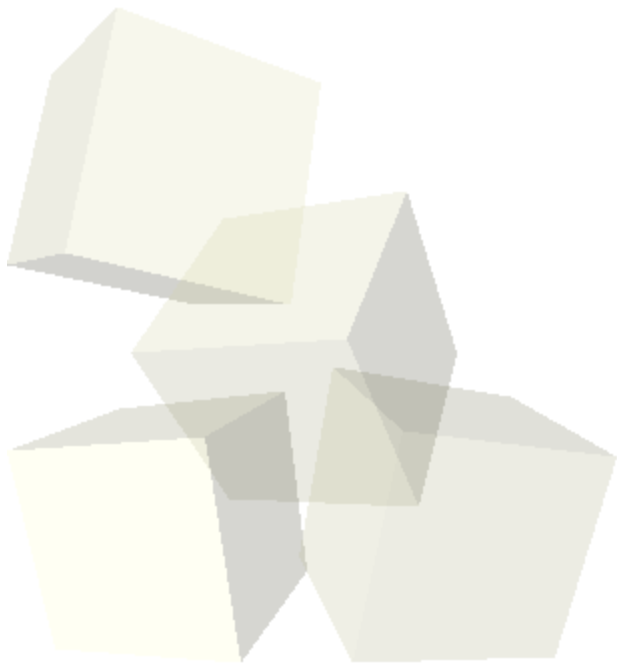 - Emerging Free SW market in Developing countries
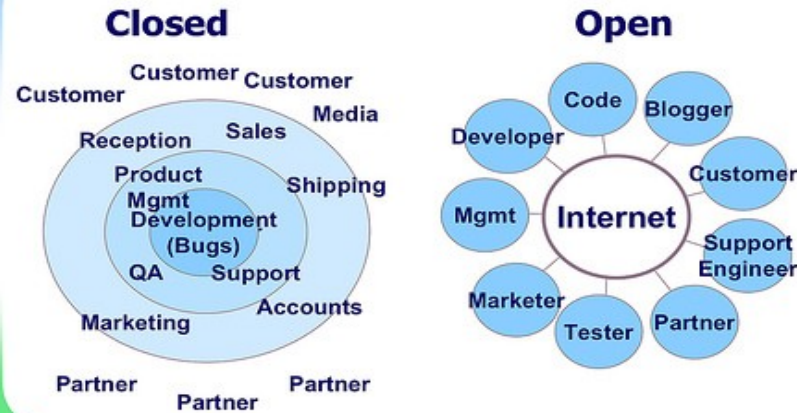
gnuLinEx
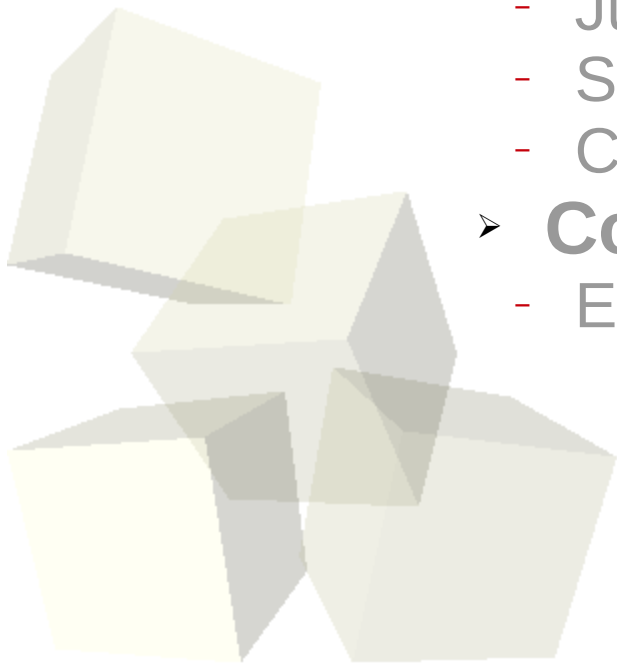
- ➤ **Advantage**
  - - **Mature market of Free SW**
    - ➤ Successful experiences (Linex)
- ➤ **Drawback** *(majority)*
  - - **Fighting against the tradition**
    - ➤ Migration expenses

Open source makes companies permeable
Support and engineering is front and center, not hidden behind sales/marketing

- ➢ **New business models**
  - ⁻ INES ines.org.es
    - ➢ EzWeb Project
    - ➢ Vulcano Project
      - ⁻ Competence center
  - ⁻ QualiPSo consortium qualipso.org
    - ➢ Trust and quality in Open Sourse Systems
  - ⁻ MORFEO www.morfeo-project.org
    - ➢ Create business opportunities around defined standards

- ➢ **New methodologies**
  - ⁻ Agile www.agileopen.net
    - ➢ Scrum, eXtreme Programming, Lean Software Development

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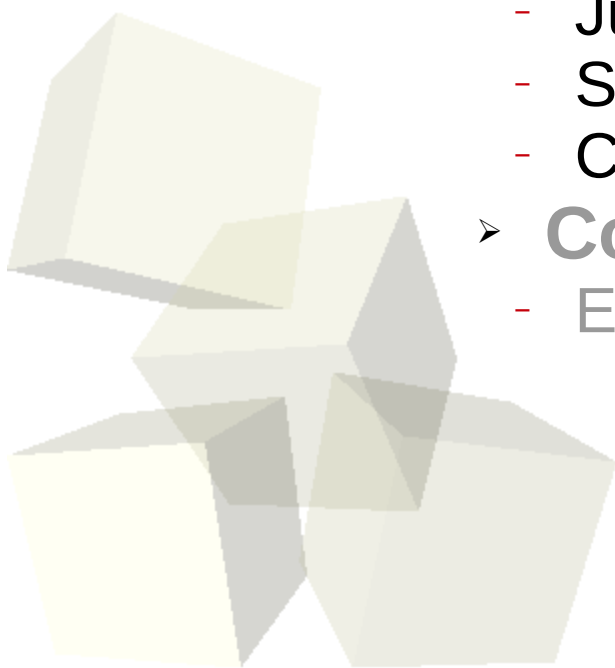 - Relation with Embedded Systems
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➢ **Jumping over an old technology**
  - Trains: steam → electric

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> **Jumping over an old technology**
> - Telephony: fix → mobile

> **Jumping over an old technology**
> - Proprietary Sw → Free SW

- **SW in Institutional Strengthening (NGOs influence)**
  - Administration
  - Education
  - Health
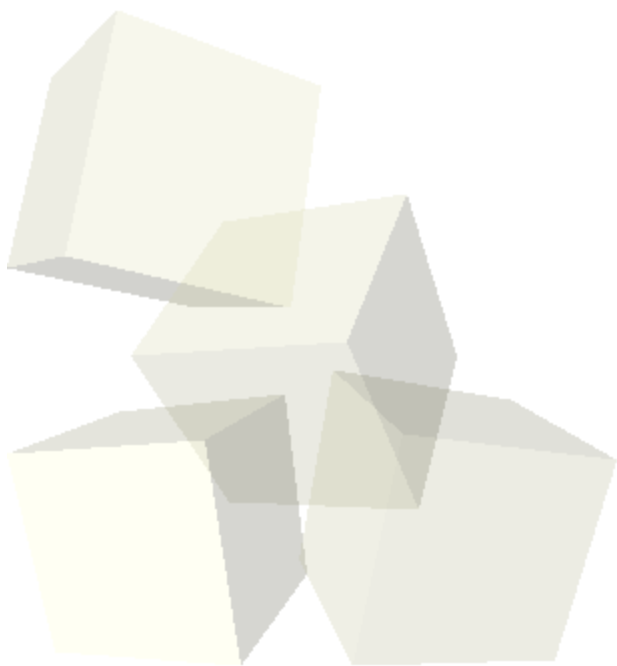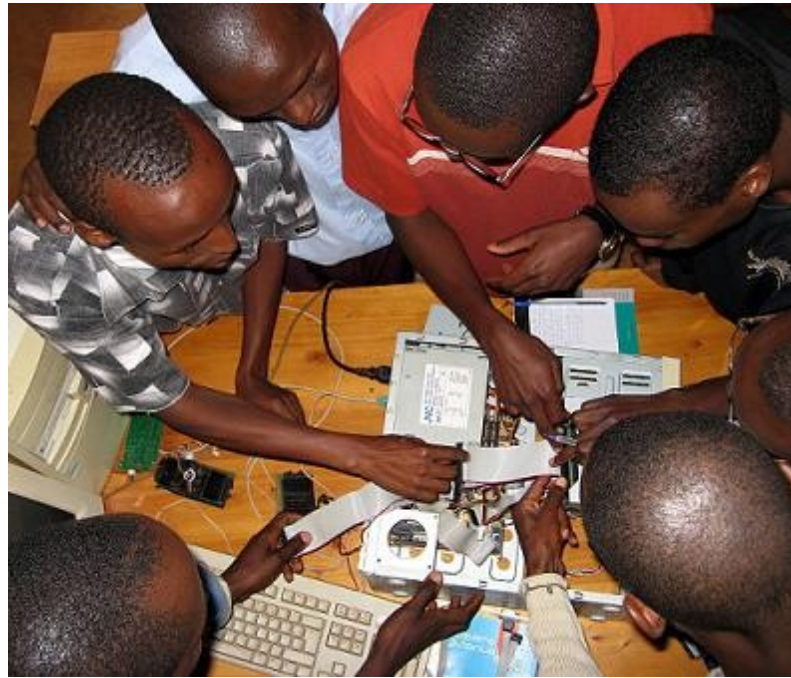
> **Cooperation influence in programming education**
  - Explicit knowledge transfer
    - educational agreements
    - e-learning projects
  - Tacit knowledge transfer
    - user SW (e.g SIG projects, Qcad, ...)
    - Web visibility

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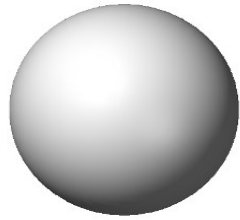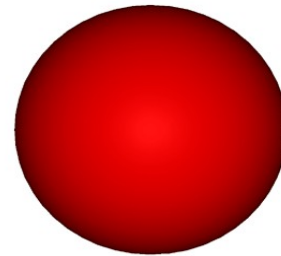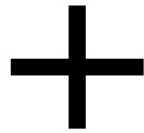 - Emerging Free SW market in Developing countries

- ➢ **Advances from developing countries**
  - 15 African countries have already published recommendations of free SW over proprietary SW solutions (Angola, Benin, Kenya, Senegal, South Africa, Tanzania, Uganda, Zambia, ...)
  - Recommended priority sectors
    - ➢ Education
      - Digital libraries
      - e-learning
    - ➢ Public Administrations
      - e-Governance
    - ➢ Health
      - e-Health
- ➢ *Cooperation influence in priority sectors*
- ➢ **Private sector**
  - Conditioned by
    - ➢ public administrations
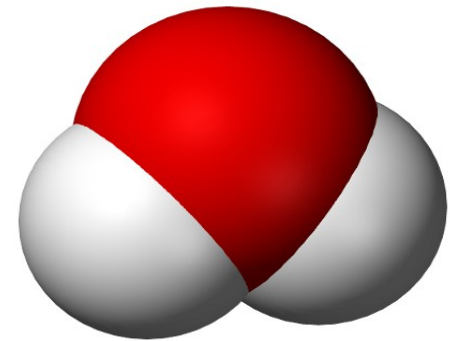   - ➢ education
    - ➢ cooperation

Progress
Change
Innovation

Non-traditional
Markets

+

Free Software
Catalyst

=

Emerging Market at
Developing Countries

- ➢ Susana Munoz-Hernandez and Jesús Martínez- Mateo. *"An Opportunity for Libre Software Companies: Emerging Market in Developing Countries"* The European Journal for the Informatics Professional. Pages 51-53. Vol. X, issue No. 3, June 2009.

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http://www.upgrade-cepis.org
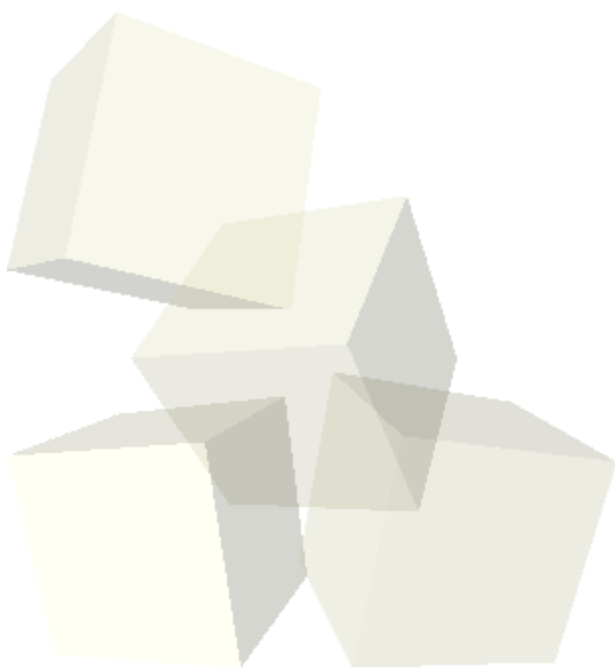
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