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Internet in the classroom and at home: the bridging role of publishers

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The Argo Project (1998-2001)

◆ US$ 50 M project for primary, secondary and vocat. schools of the Catalonia Department of Education (Spain, capital city: Barcelona), aiming:

  – to increase the amount of computers in the schools, improving their connectivity

  – to generalize students' access to the Internet

  – to stimulate students' best use of ICT

  – to foster the availability of multimedia resources, specifically in Catalan language and for the Internet

  – to empower teachers through information technology

The XTEC Internet Service

◆ XTEC (Catalan Educational Telematic Network) is an Internet service:

- – Specific for teachers, students and schools

- – Operative since 1995 (created in 1988)

- – Open to cooperation of every education actor

- – Provides e-mail, web, educational and management applications, curriculum materials, video on demand

Need of a public Internet service

◆ To actively foster ICT & Internet culture in education

◆ To ensure equity of access
- – socio-economical status
- – gender issues, special needs

◆ To cope with:
- – the vertical integration on the information sector: authoring, processing, delivery of content, access and control
- – the specific requirements of the education system

Technological partners

- Sun Microsystems (Enterprise 10000, Enterprise 3000, Netra)

- Cisco Systems (school ISDN & ADSL routers, Cisco 7200 and 2500 series routers, Catalyst 6500 switch)

- Oracle (Oracle 8i, InterMedia, Video-on-demand server, Portal-to-go)

- Telefonica & RedIRIS

XTEC Content partners

- ◆ Schools, students and teachers ("bottom-up"approach to content generation)
- ◆ Professional textbook & multimedia publishers ("top-down"approach to content provision)

Views of XTEC portal

- XTEC general portal
  - information, teacher training, administrative uses
  - schools websites
- EDU365 students' portal
  - intellectual work with information
  - personal communication
  - educational content ("Internet in the Classroom")

Students' portal services

◆ Digital Desktop

– office suite, language dictionaries, encyclopaedias

– symbolic, numerical and graphical calculator

– content management, information retrieval and web search services

◆ Communication Tools

– e-mail, web message board

– video-conferencing

– mobile phone exchange

◆ Thematic Web-based Content

Thematic Web-based Content

- Instructional and curriculum content (with the participation of educational publishers, 6 main content projects currently underway)

- Web communities (collaboration projects, thematic structure, space open to participation)

- Educational and career guidance (counseling services, individualized programs, vocational interests, work experience programs)

- Leisure and spare time

Summary: portal levels and views

XTEC general portal

    students' portal

        thematic web-based content

        curriculum content

            publishers content

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┌─────────────┐   ┌─────────────┐   ┌─────────────┐   ┌─────────────┐
│  Teachers   │   │  Students   │   │ Management  │   │   Other     │
└─────────────┘   └─────────────┘   └─────────────┘   └─────────────┘
       ↕                 ↕                 ↕                 ↕

┌─────────────────────────────────────────────────────────────────────┐
│                        PORTAL SERVICES                                │
└─────────────────────────────────────────────────────────────────────┘
       ↕                         ↕                         ↕

┌─────────────┐        ┌─────────────┐           ┌─────────────┐
│   Content   │        │ Application │           │ Integration │
│ Management  │        │   Server    │           │  Services   │
└─────────────┘        └─────────────┘           └─────────────┘
                              ↕                     ↕         ↕

                       ┌─────────────┐      ┌──────────┐  ┌──────────┐
                       │ Educational │      │ Specific │  │          │
                       │ and Management│    │  Tools   │  │ External │
                       │ Applications│      │Applications│ │ Services │
                       └─────────────┘      └──────────┘  └──────────┘
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"Internet in the classroom" model

- Internet in the classroom

- systematic curriculum content

- to bring into day-to-day classroom activities

- the most adequate techniques of content presentation and interactive simulation

- any material accessible via Internet

- any personal interaction in real time

- expand the demonstration, simulation and information synthesis capabilities of teachers

Sun Microsystems Enterprise 10000

Department of Education

External Services

Gigabit

100 Mb   100 Mb

Direct ISDN   34 Mb

Teacher's computers
(at home)

30 x 64 Kb

34 Mb

Internet

School
Networks

New technologies

School
Networks

Router

Telefonica
Up to 1000
simultaneous
comunications

Cable Modem

ADSL

2-6 Mb

ISDN

LMDS
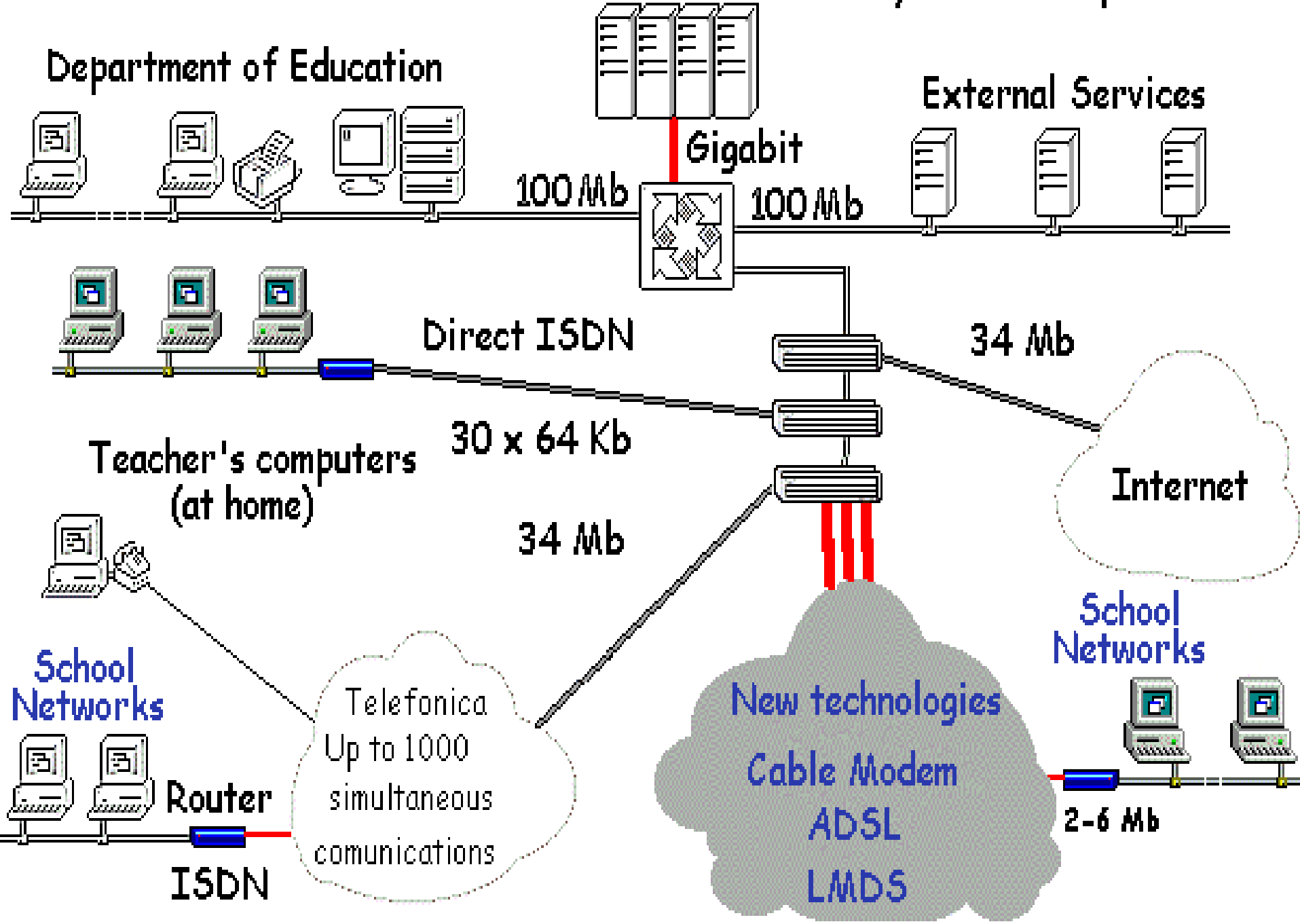
Thank you very much

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