

# ATM Networking

## A Modular Systems Approach

*ORL's kit of ATM hardware and software modules build into a rich variety of switch fabrics and end-points*

*The principles of modularity and reusability apply at all levels of our system design*

### Modular Hardware

The foundation of our modular hardware is the ATMos card consisting of an ARM processor, some DRAM, a generic interface and an ATM network interface based around 100Mb/s TAXI chips.

All of our ATM end-points comprise an ATMos card and a peripheral option card. This approach gives us low cost, maximum reusability and a fastrack to prototyping.

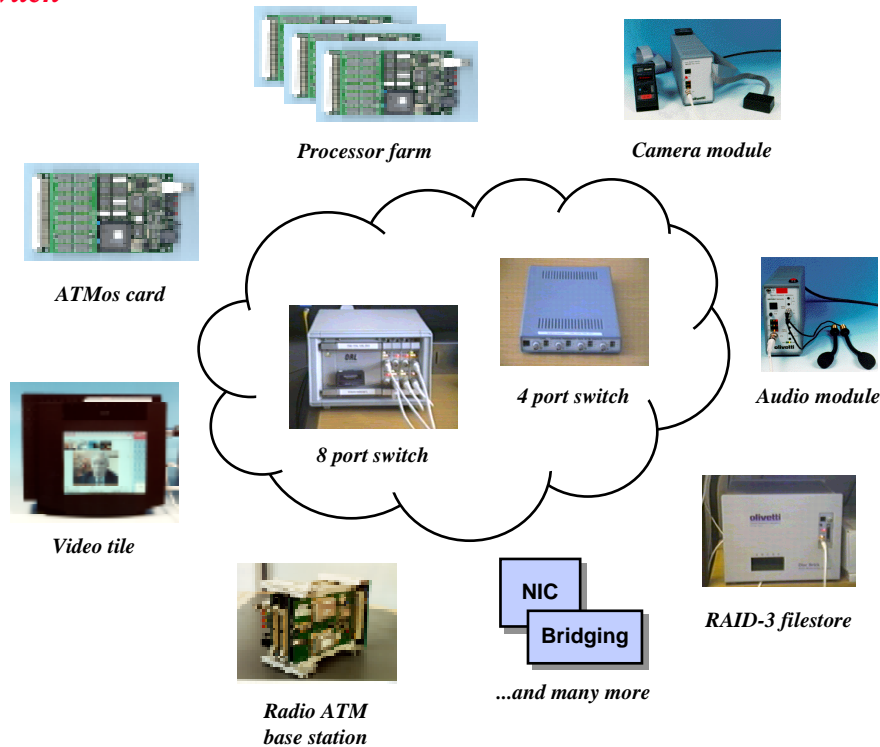
Our ATM switches share the ARM based design of the ATMos card. Software controlled, hardware assisted ATM cell switching provides flexibility and delivers throughput in excess of 1M cells/s.

### Network Applications

Medusa: Modular Networked Multimedia

Mobile Streams: Multimedia Follows You Anywhere

Radio ATM: Extending ATM into the Wireless Domain



### Modular Software

Both switches and end-points use the ATMos kernel - a lightweight, real-time microkernel developed at ORL.

Each ATMos system is built from the ATMos kernel and component modules selected from a large library. These modules are written in C or C++ and have a clearly defined external interface.

Library modules include:

- system components  
console, timer, pthreads
- networking support  
tcp/ip, xtp, CORBA orb
- end-point drivers  
audio, video, filestore

The ATMos kernel development environment includes cross-compilation, linking and debugging utilities together with a distributed, network boot service.

**ARM** ARM is a RISC processor widely used in embedded systems and network computers.  
Advanced RISC Machines

**ATM** Switches and the ATMos kernel are being commercialised by ATML, an ORL spin-off.

**ORL** End-points are being commercialised by Telemedia Systems Limited, an ORL spin-off.