- First, a note about our logo. it does not represent a n FDDI ring but it stand there to remind partecipants the possibility of a bit routing loop, and this incidentally matched the colosseum and inspired the art.
-
- **ECHNICAL ARCHITECTURE**
- **abount the technical architecture there isn't anynthing very much exciting. because the bandwith initially needed wasn't very high a standard ether has been choosen but with path to switched.**

  Shared Ethernet, migrating to switched.
  ISP-provided routers.
  Route Server deployment.

about the route server his deployment has been choose not for the immediate need but to save further resource for the future. what is hard to do has to be done before. as you know a route server is an host that runs special routing software to and that keep multiple BGP sessions with the ISP provided routers, this allow an uniform approach to policy changes and simplify maintenance.

- **MANAGEMENT ARCHITECTURE**

  Mix of business-oriented, user-oriented and academic ISP's.
  the management of all NAP services is shared. The caspur provides the facilities for free.

this is a first year agremeent and can change in the future, but it as chhosen because the CASPUR connect to NAP they customer without paying any line costs.

  Free housing at CASPUR.

- **PARTECIPANTS**

  Agora'
  Caspur
  GARR (soon)
  ITnet
  MClink
  UniNet
  2 undisclosed

the partecipants of the nap aren'all of the same nature and i will take a second to explain why. agora and mclink are two networks that are vguely stands on the on-line model, and evolved from propeirtary interfaces to Inernet access for individuals. They have throute thei multiple access pount an audience of more than 20000 persons.the two ISP itnet and uninet are nationo wide ISP for business marketsand they have both nationwide coverage and multiple links. the CASPUR that hosts the NAP is in full words the consorituim for the application of supercalculation for academy and research. they connect to the NAP other networks of affiliated organizations. GARR need

- **GOALS**

  Dramatic routing effectiveness improvement.
  Public services vicinity.

Testbed for routing R&D.

Obviously the NAP has optimized the long paths that used to be taken by packets before his establishement and this remains his main reason-d'etre. due the slow lines and the italian architecture ths routing was and still in many cases very inefficient.
A particul word must be spent about 'the public services' that are very close (on a separate ethern) to the NAP partecipants. There as been many interest by public administration in italy about the potentiality of the internet services for the communities and this lead to the 'civi networks' that hosts Web servers for the municipality and for the associated public services like transports, power and water. the partecipants feel that a good way to support and give optimal access to these services was to come to place where they are, and this another reason for the chhose of CASPUR as location. Other public services but a more technical nature are the DNS will be authoritative for italy, as proposed papers on the subject, and a full features news servers.

- **APPLICABILITY**

Must have another link
Must be AS.
Adherence to the MLPA

The requirements to partecipate the nap are quite simple: have anothe way to the internet with an own AS number. The MLPA has been choosen as an agreement formula to lead at generalized traffic exchange, instead of private peering agreements. The partecipants are of course free of establish transit policies or 0other agreements among them.

- **FACILITIES**

Workhours coverage, alarm intervention.

the environment at caspur is the classicabig machine-room one. the power supply isn guaranteeded and physical access to the facilites is available to hte partecipants during normal workhours. Currently there is no human presence at night and during holidays except for security. Anyway the CASPUR has an alarm and escalation interventions services based on alarms sent to personal pagers.

Full UPS and monitoring.
Rack space for monster-routers.
Statistics.

- **FUTURE**

National NAP.
South-European NAP.
Mediterranean NAP, including North-Africa
International links.

The NAP candidates himself as national, south-europen and mediterranan NAP. Considering his geographical position and histori strong relations with these world we don't think that this ambition is excessive. There are curretly talks in this direction and we hope to be able to give you more informations soon. Final note, the NAP rome is going to connect to other IXP that i can't disclose at the present. The costs for such connection will be shared amond all the partecipants and this is done with the architectural ambition of a strong performance enahcnementh for the NAP partecipants.