Assumptions

- The packet is the fundamental unit of service (not cells or circuits).
- Active Nodes are connected by a variety of different packet-forwarding technologies.
- The *primary* function of the Active Network is moving information (and not computation).
- All Active Nodes support a single “base functionality”.
- Users access AN services via the base functionality.

More Assumptions

- There will be more than 1 higher-level service.
- Each Active Node is controlled by an administration.
- No administration controls all Active Network nodes.
- Administrations may or may not trust each other.
- Strong cryptographic mechanisms are available.
- Others?

Goals for the Architecture

- A generic model that admits all existing approaches.
- Support fast-path optimizations (at least don't hinder them).
- Support customization of almost any aspect of node processing, including global policies that are part of base functionality.
- Functions affecting security of the system are *not* left entirely to the higher-level services.

Questions

- How many higher-level services (like ANTS, PLAN) have to be supported?
- What goes in the base functionality?
- What low-level abstractions are supported by each active node?
  - Interface: to send/receive packets, establish per-flow queues, reserve BW, etc. (Also to applications.)
  - Routing Table: Maps Addrs to Interfaces
  - Addrs: Key for Routing Tables
- What are the differences between End Systems and Intermediate Systems?