Client-side Update to Handle M
Address Resolution Servic
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ATMARP <> NHS Interaction Is

These slides have been updated to refect the comments and consensus made a IPATM and ROLC Working Group(s) meeting on Monday, April 3rd, 1995. The fo have been used to indicate where the material should lie in the RFC1577 update not to be appropriate is indicated as with a strikeout notation.

(R) Required - will be in main body

(I) Informational, will be in a

RFC1577+ Address Resolution Ser

Intro/Problem Statement

Intro:

- **ATMARP service and server introduced in RFC1577**

Problem:

- **Single server issues w.r.t. fault tolerance - S.P.O.F.**
- **No initial support for alternative services; e.g., NHRP**

Proposed Solution:

- **Augment classical client to support generalized multiple resolution services capability**
- **Don't break single server model for clients or ATMARP s**
- **Don't change VC state independence**

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Generalized Multiple Service Detai

Summary of Changes:

- (R) **Change the single ATMARP Request Address (atm$arp- configuration parameter to be a list of server addresses**
- (R) **Type the entries in the list as to type of service: ATMAR**
- (R) **Type the service address as to unicast or multicast**
- (I) **Keep operating state for each entry: up/down flag, down**
- (I) **New algorithm for *cruising* the list and timing out server**

Notes:

- (R) **Local administration decides which services/servers an order are appropriate for the LIS**
- (R) **All services share/co-mingle the same ATMARP table or**

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Generalized Multiple Service Algorit

Init to top of the list

While cruising list and if server “up”

If no open VC, open one, if open ok

Format a request to the server appropriate to the s

Send the request

Get a good response, ok, return with address

Get a NAK, move to next service (normal)

Get a timeout, mark entry as “down”, close resour

If open fails, mark as “down”, close resources

Move to next service

Address resolution failure

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Other Stuff

Server States

- **A server is "up" unless the client experiences a timeout a an address resolution request**
- **A "down" server is re-tried every 5 minutes (based on d timestamp) by attempting to reopen a VC to the server, i opens ok, server is marked "up", otherwise it remains "**

Server Synchronization Standardization

- ~~**Left entirely up to the implementer / service**~~
- **RFC1577+ *will ~~not~~* require synchronization; i.e., the defau be the single ATMARP server as documented**
- ~~**However, some informational-only synchronization exam included in the appendices to RFC1577+**~~
- **Mark will look at adapting OSPF Designated Router spec**

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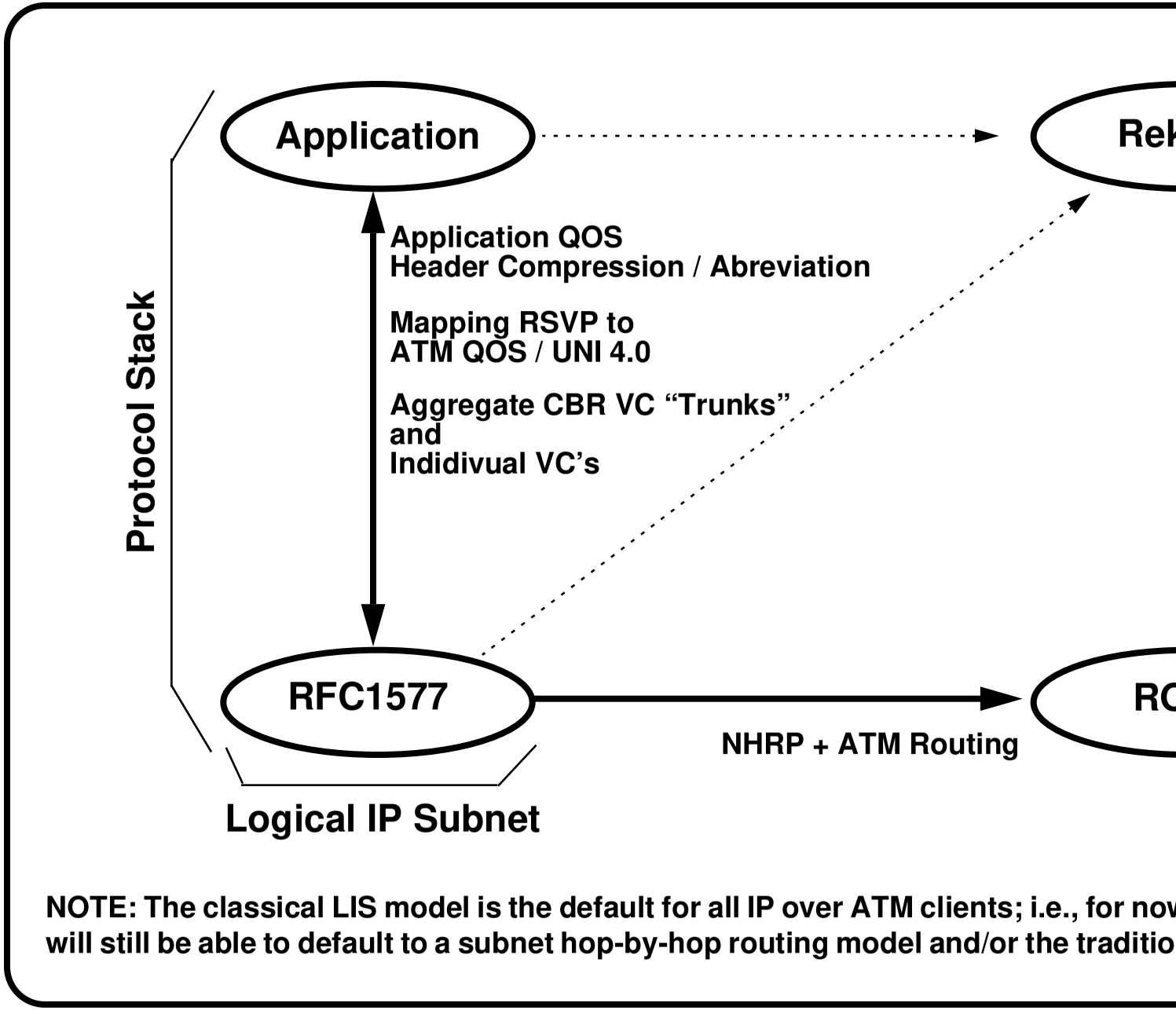
What about information leakage?

- **Assumption: initially this assume an ATMARP server an server are in the same “box” - i.e., let’s not invent anoth**
- **What information is valid to leak in each direction betwe ATMARP server and an NHS?**
- **When is it appropriate to leak?**
- **When is it not appropriate to leak?**

Other Stuff

- **Security is an issue**
- **Look at Q.2931 address verification support**



NOTE: The classical LIS model is the default for all IP over ATM clients; i.e., for now will still be able to default to a subnet hop-by-hop routing model and/or the traditio