REVIEW CURRENT STATUS OF

RSVP FUNCTIONAL SPECIFICATION

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RSVP Working Group

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UPDATE V.1 FEATURE CHART

	SanJose	ID07	
RSVP FEATURES	**V1**	**V1**	**V2**
A. Advanced Interface to routing			
1. Alternate routing	N	N	Optional?
2. Fast reservation recovery	hps	Y (local)	Y
3. Route pinning	N	N	Y
4. Bundling of routes	N	N	Y?
5. Inactive route state (DF)	N	N	?

B. Session Groups	Y?	N	Y
C. Have Drop Flag in Path msg	N	N	N
D. IPv6 support			
1. Big addresses	Y	Y	Y
2. Flow Id support	be	Y(*)	Y
E. Filter spec formats:			
1. (mask,val)	N	N	N
2. Protocol-specific format	Y	Y	Y
3. Pseudo-machine	N	N	?

F. Styles			
1. WF, FF	Y	Y	Y
2. DF	hps	N	Y?
3. SE	(Y)	Y	Y
4. Merging WF with DF or FF	N	N	N
5. Other styles	N	N	Probably
G. Negotiation Models			
1. OPWA (1-pass w/advertising)	be	Y	Y?
2. Two-Pass	ffs	N	ffs

H. General container transport			
1. RSVP msg syntax	Y	Y	Y
2. All-purpose resv protocol	N	N	?

KEY:
hps => "high-priority study"
be => "best effort"
ffs => "for further study"

AGREEMENTS IN WORKING GROUP

o Negotiation model:

Spec supports one pass model and OPWA

OPWA testing is in progress

Open issue: when to forward Resv that failed Admission Control

o Filterspec representation:

Adopted simplest: Addr/port (or Addr/Protocol_Id)

o Support for hierarchically-encoded flows

Adopted multiple multicast groups

Open issues: session groups, bundling

- **o Routing interface:**
  - Tentatively adopted local repair
  - Alternate routes and route pinnint: experimental
- **o Killer reservations:**
  - Simple solution in place
- **o Access Control**
  - Work in progress, placeholder is spec

THE FRAGMENTATION STORY

1. Semantic Fragmentation

Each fragment is complete RSVP message

ADVANTAGE:

o Reassembly is generally trivial

DISADVANTAGES:

o Fragmentation rules are complex

o Reassembly has annoying special cases --

e.g., need TAG object for SE style.

o Ill-defined limits on sizes of each object

o Carries redundant information

FRAGMENTATION STORY...

2. IP Fragmentation

ADVANTAGES:

o Nothing to do.

DISADVANTAGES:

o Bad loss behavior: Losing one fragment loses message.

o Some routers may not implement it correctly.

o Requires buffering perhaps very large message

FRAGMENTATION STORY ...

3. RSVP-level Linear fragmentation

ADVANTAGES:

o Don’t depend upon IP reassembly code

o Could later interpret partial messages (but complex!)

DISADVANTAGES:

o Bad loss behavior: Losing one fragment loses message.

o Slightly more complex than IP fragmentation

o Requires buffering perhaps very large message

(but only during reassembly)

SPEC NEEDS:

o Discussion of multihoming

o Discussion of flow labels

o Partial wildcard filters

o Update flowspec format

o Carrying TTL in UDP encapsulated Path message

o Term “Scope” is ambiguous

o Parity of Class_num bit

o Need LUB-Used flag?

OPEN ISSUES

o When forward Resv that created Admission Control error,
and when send error message?

o Does incoming interface check remove obstacle to pseudo-header?

o Handling unknown object types/backwards compatibility

o Multilevel multicasting, shared trees?

o Address mask in filterspec?

o Need some standard compression scheme?

o Require that all interfaces use consistent style?

o Mobile IP tunneling

o Unicast UDP encapsulation