SIP Precedence mapping to MLPP Interworking

draft-polk-sip-mlpp-mapping-00.txt

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Basic premise of I-D

This I-D proposes an extension to SIP for direct interworking and interoperability with TDM-based Multi-Level Precedence and Preemption [2] Service Capability networks.

This document will further include details and similar mechanisms to evolve and/or replace existing TDM-based MLPP network topologies with SIP-based Voice Signaling topologies with no loss of capability.

Although additional mobility and capabilities can easily be realized with this complete topology architecture implemented within a Pure IP Environment.

Background on MLPP

MLPP stipulates a relative priority ranking order of Call flows on a hop-by-hop basis through a Voice Network from their relative beginning Voice device to the end Voice device

Each TDM Switch, upon initiation of a higher priority call flow where there were not available outbound resources or trunks, preempted a lesser priority call flow by seizing the resources of an existing external truck circuit to satisfy that higher Priority Call.

MLPP Precedence Level Values

- There are 5 Levels of Precedence within an MLPP network:

```
bits     Name

----     ----

0000   "Flash Override" (0)
0001   "Flash" (1)
0010   "Immediate" (2)
0011   "Priority" (3)
0100   "Routine" (4)

0101 to
1111  "Spare"
```

Current SIP Header-Field "Priority:"

SIP defines the Priority request-header field and its possible non-mandatory values in section "6.25 Priority" as the following (exact text from page 40 of RFC2543):

```
"    Priority        = "Priority"     ":" priority-value
      priority-value = "emergency" | "urgent" | "normal"
                            | "non-urgent"
```

Proposed SIP Header-Field "Priority:"

Specifically this I-D requests that this 5th Highest Priority
value be included within SIP, and take this name of
MLPP's Highest Priority Value or Level

```
"   Priority        = "Priority"    ":" priority-value
    priority-value = "flash-override" | "emergency"
                     | "urgent" | "normal" | "non-urgent"
```

Summary recommendations of I-D

Include the 5th Highest Priority Value "Flash-Override" in SIP Header-Field "Priority:"

Optionally allow a Domain Administrator to make the SIP Header-Field "Priority:" mandatory within that Domain

User must be authorized to access higher priority values for any Higher Precedence call

Header-Field "Priority:" value MUST be default set to agreed upon lowest value -- unless calling user specifies a 'Domain authorized Higher Value' for that call session;