SPEERMINT
IETF 71 - Philly

draft-ietf-speermint-voip-consolidated-usecases

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Status/Changes

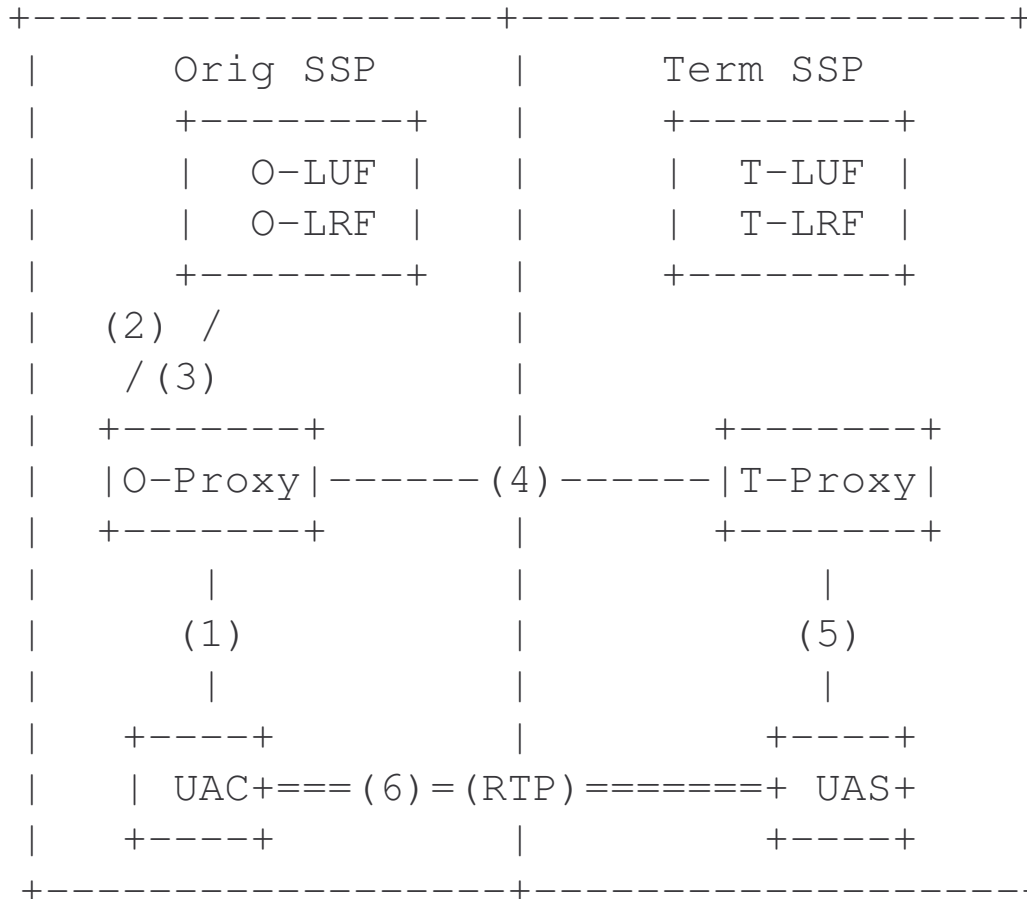- One revision since IETF 70. -05 is published, -06 is work in progress and will be published shortly after Philly

- Changes
    - Terms sync-up. Now that the term draft has settled down, we have sync'd up for about the 5th time.
    - Diagrams were edited to clarify use cases.
    - Folded up Federation discussions somewhat, but still an open item.
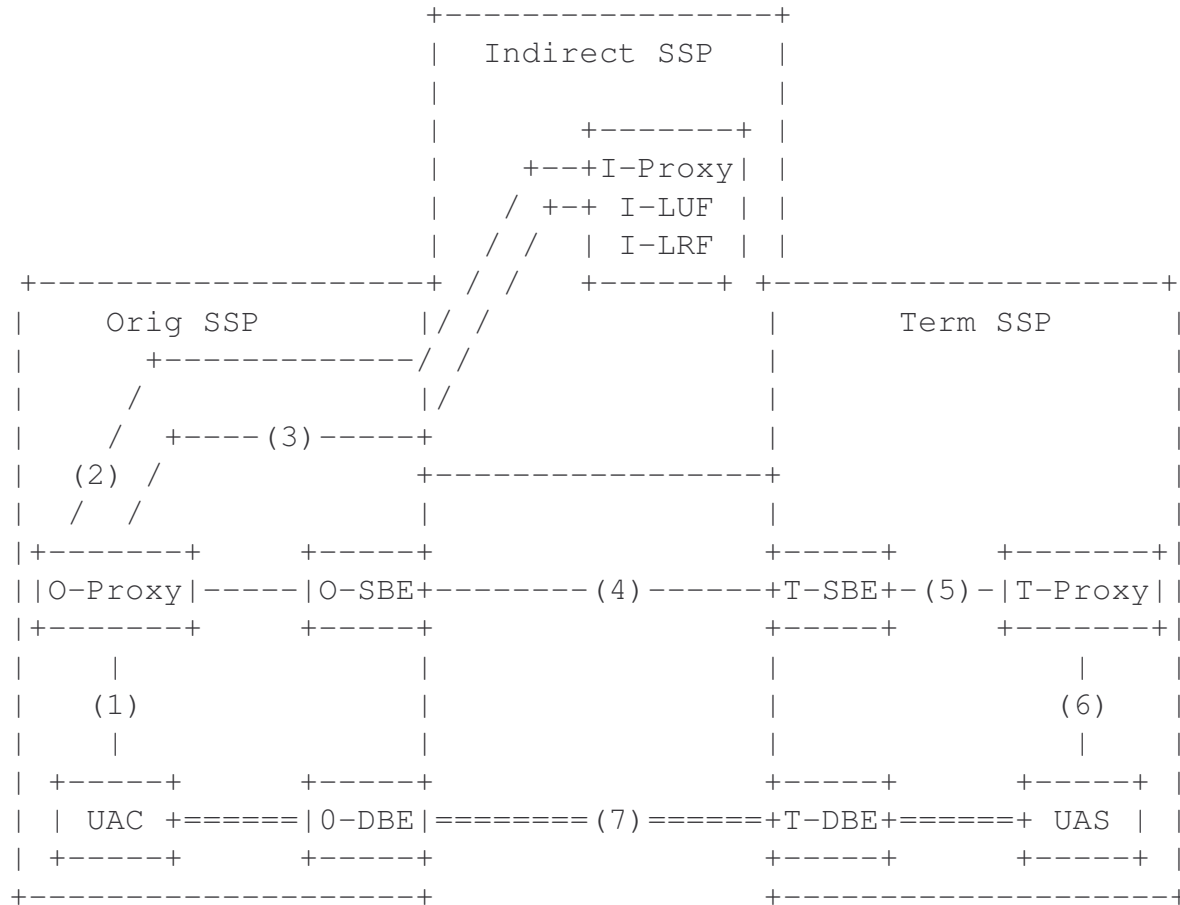   - Editorial nits are significantly addressed in 06

Reference ASCII Art

```
+---------------+---------------------------+----------------+
|               |    Indirect SSP Domain    |              | |
|               |                           |              | |
|               |    +------+ +------+      |              | |
|               |    +I-LUF + + I-LRF|      |              | |
|               |    +------+ +------+      |              | |
|               |                           |              | |
|               |       +-------+           |              | |
|               |       |I-Proxy|           |              | |
|               |       +-------+           |              | |
|               |                           |              | |
|               |    +------+ +------+      |              | |
|               |    | I-SBE| | I-DBE|      |              | |
|               |   \ +------+ +------+ /    |              | |
|      +------+   \                   /   +------+         | |
|  +-----+O-LUF +   \               /   +T-LUF +-----+     | |
|  |      +O-LRF +    \             /    +T-LRF +     |     | |
|  |      +------+     \           /     +------+     |     | |
|  |                    \         /                   |     | |
|  |      +------+       \       /      +------+       |     | |
|  |      | O-SBE+        \     /       + T-SBE|       |     | |
|  |      +--+--+          \   /        +--+--+        |     | |
|  |         |              \ /            |           |     | |
|  |         |               \ /           |           |     | |
|  |      +---+---+         \ /         +---+---+       |     | |
|  +-----+O-Proxy|          \ /          |T-Proxy+--- + |     | |
|         +-----+-+          +           ++------+         | |
| +----+        |            |           |       +----+   | |
| |UAC +--------+            |           +--------+ UAS|   | |
| +----+                     |                    +----+   | |
|          +------+          |     +------+                | |
|          | O-DBE|          |     | T-DBE|                | |
|          +------+          |     +------+                | |
|                            |                             | |
|    Originating SSP Domain  |  Terminating SSP Domain     | |
+---------------------------------------------------------+ |
```

Categorizations of Use Cases

- ## Direct Peering
  - Direct peering describes those cases in which two SSPs peer without using an intervening layer 5 network.

- ## Indirect Peering
  - Indirect, or transit, peering refers to the establishment of either a signaling and media path or signaling path alone via one (or more) transit network(s)

- ## On-demand Peering (we will talk about this later!)
  - SPs are said to peer on-demand when they are able to exchange traffic without any pre-association prior to the origination of a real-time transaction (like a SIP message) between the domains.

- ## Static Peering
  - SSPs are said to peer statically when pre-association between providers is required for the initiation of any real-time transactions (like a SIP message).

Direct Static Peering

```
+-----------------+------------------+
|    Orig SSP     |    Term SSP      |
|   +-------+     |   +-------+      |
|   | O-LUF |     |   | T-LUF |      |
|   | O-LRF |     |   | T-LRF |      |
|   +-------+     |   +-------+      |
| (2) /           |                  |
|   /(3)          |                  |
|  +------+       |        +------+  |
|  |O-Proxy|------(4)------|T-Proxy| |
|  +------+       |        +------+  |
|     |           |           |      |
|    (1)          |          (5)     |
|     |           |           |      |
|   +---+         |         +---+    |
|   | UAC+===(6)=(RTP)=======+ UAS+  |
|   +---+         |         +---+    |
+-----------------+------------------+
```

Indirect Look-up, but Direct Peering

```
                            +----------------+
                            |  Indirect SSP  |
                            |                |
                            |       +------+ |
                            |    +--+I-Proxy| |
                            |   / +-+ I-LUF | |
                            |  / /  | I-LRF | |
+------------------+  / /   +------+ +------------------+
|    Orig SSP      |/ /             |    Term SSP       |
|      +-----------/ /              |                   |
|     /           |/               |                   |
|    /  +----(3)-----+             |                   |
|  (2) /         +----------------+|                   |
|  / /           |                 |                   |
|+------+     +-----+          +-----+     +------+|
||O-Proxy|-----|O-SBE+--------(4)------+T-SBE+-(5)-|T-Proxy||
|+------+     +-----+          +-----+     +------+|
|  |             |                 |          |   |
|  (1)           |                 |         (6)  |
|  |             |                 |          |   |
| +-----+     +-----+          +-----+     +-----+ |
| | UAC +======|O-DBE|========(7)======+T-DBE+=====+ UAS | |
| +-----+     +-----+          +-----+     +-----+ |
+------------------+             +------------------+
```

Indirect Lookup, Indirect Peering (Both Sig and Media)

```
                              +----------------+
                              |  Indirect SSP  |
                              |                |
                              |     +------+   |
                              |  +--+I-Proxy|   |
                              |  / +-+ I-LUF |   |
                              |  / /  | I-LRF |   |
+------------------+ / /     +------+   +------------------+
|   Orig SSP       |/ /                 |   Term SSP       |
|     +-----------/ /                   |                  |
|    /           |/                     |                  |
|   /   +--(3)-------+                  |                  |
|  (2) /         |                      |                  |
|  / /           |                      |                  |
|+------+    +----+     +----+     +----+      +------+|
||O-Proxy|-(4)-|O-SBE|-----+I-SBE+(5)---+T-SBE+-(6)-|T-Proxy||
|+------+    +----+     +----+     +----+      +------+|
|   |          |           |          |            |  |
|  (1)         |           |          |           (7) |
|   |          |           |          |            |  |
| +----+    +----+     +----+     +----+      +----+ |
| | UAC +=(8)==|0-DBE|=====+I-DBE+======+T-DBE+=====+ UAS | |
| +----+    +----+     +----+     +----+      +----+ |
+----------------------------------------------------+
```
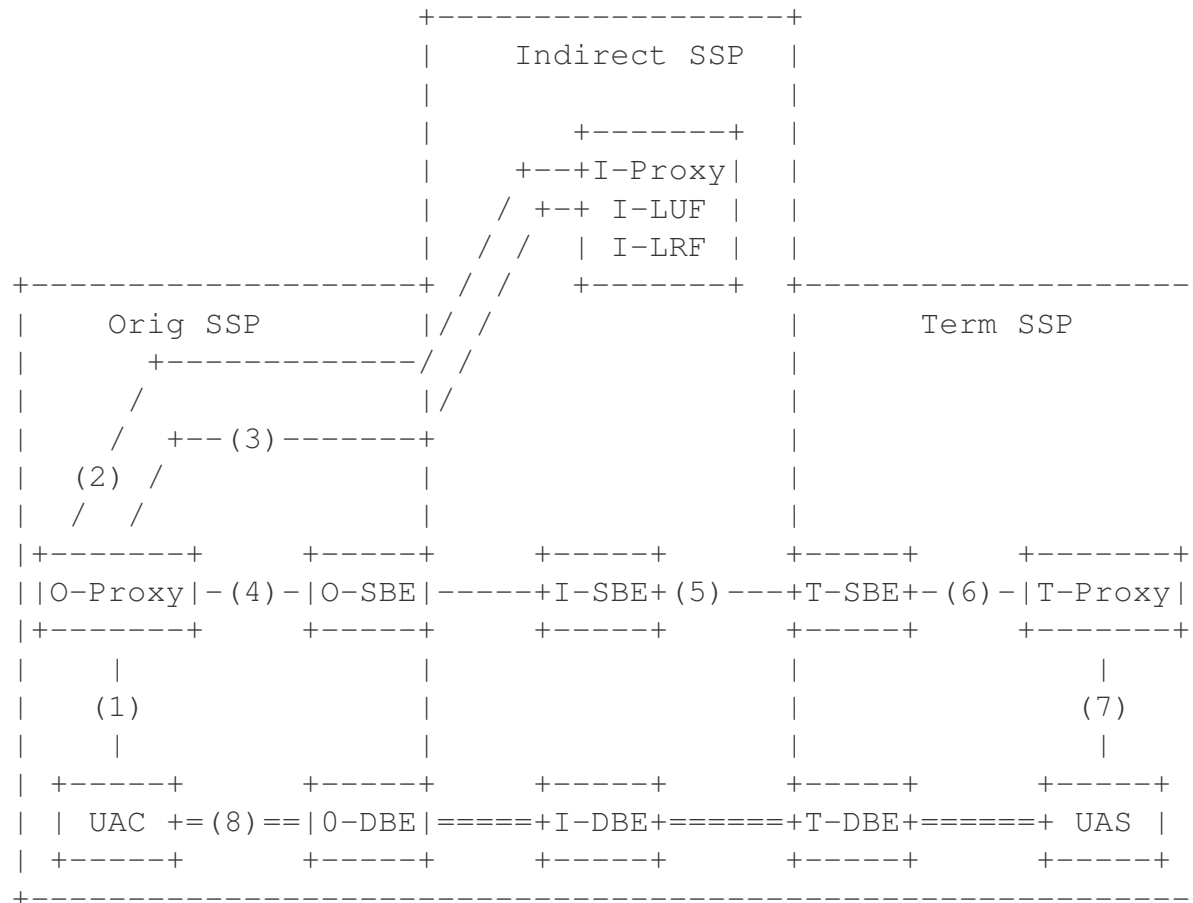
I-DBE path is optional, may be direct
from O to T.

Next Steps…

- Clean up NITS

- Add message details

- Further clarification of Goal, Summary, Actors, Preconditions, Triggers, Basic course of events, Alternative paths, etc

- Are there any "On-Demand and DIRECT" use cases in the wild today? (anyone have an "allow any/all" ACL on their SBEs?)

- What to do about Federations? We feel that Federations are simply indirect use-cases. Should we still spell it out in draft or just cite it as an example?