Strategies for OTT Federation

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The OTT ecosystem isn't doing too badly.
WhatsApp:

>600M MAU
60% MAU:DAU
97% penetration (in Spain)
How do we harness this success?
Drives data...

...but eats messaging/voice revenue.
So how many are there?
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<tr>
<th>Google</th>
<th>Apple</th>
<th>Facebook</th>
<th>WhatsApp</th>
<th>Telegram</th>
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<tr>
<td>Hike</td>
<td>Groupme</td>
<td>Viber</td>
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<td>Line</td>
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...and all the others too...
What's the end-user experience like?
With so many apps you might think there was great consumer choice...
...but your contacts dictate which app to use.

You can't pick the ones you actually prefer.
It's not "channel surfing TV"...
... it's like having 20 television sets in your living room, one per channel 😞
So why put up with it?
Users seem to blindly accept the situation.

"It's just how it is."
If email suddenly became this fragmented, users would go apocalyptic.
So how did it end up like this?
1. The standards simply didn't work robustly on the real-world internet, encouraging startups to build proprietary closed solutions.
• SIP lacked firewall traversal until ICE & TURN
• RTP lacked standardised dynamic bitrate control and FEC
• SDP lacks exhaustive capability negotiation
• XMPP provides too low a baseline featureset
2. Federation of the old IM networks was not successful - by the time AIM/ICQ/MSN/Google Talk eventually managed to federate, they had been all but killed by Facebook.
3. The big OTT's don't have any incentive to federate: silos can themselves be financially successful.

It's "just" the end user who suffers...
Matrix provides a possible solution...
Introducing Matrix

• New Open Source project (launched Sept 2014)
• Setting up as non-profit org (matrix.org)
• Publishing pragmatic simple **HTTP** API standard for federated VoIP (**WebRTC**), IM and generic messaging.
• Defines client-server and server-server APIs (and, shortly, server<->application-server APIs).
• Provides Apache-Licensed reference implementations of the server and clients (web, iOS, Android, Python, Perl...
Key Characteristics

• Entirely open:
  – open standard; open source; open project.

• Message History as first-class citizen

• Group communication as first-class citizen
  – Fully distributed room state (cryptographically signed) - no SPOFs or SPOCs.

• Strong cryptographic identity to prevent spoofing

• Identity agnostic

• End-to-end encryption (RSN)
Strategy:

• Chase the long tail of:
  – Emerging OTTs
  – Telco OTTs
  – Tier 2-3 OTTs

• ...and glue them into one great big meta-OTT.

• Encourage vendors to build gateways to the PSTN (e.g. RCS, IMS, SS7)

• Try to convince the Big OTTs to expose their lowest common denominator service via Matrix.
What does this have to do with RCS!?
RCS is great for Telco interworking.

OTT interworking is a very different problem domain.
RCS isn't exactly web- or internet-friendly technology.

Just for IM you need to understand MSRP, SDP, IMS, SIP, SIMPLE, XCAP...
So we think both RCS and OTT federation will co-exist.
Telcos will benefit from extending RCS's reach to OTT federation – interoperating via gateways and hubs.
Finally, operators will be fully harnessing OTTs...

...and end-users will enjoy a fully seamless experience over PSTN and OTT services.
THANK YOU!

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