AD Evaluation of Translator documents

draft-ietf-behave-v6v4-framework-08
draft-ietf-behave-address-format-05
draft-ietf-behave-v6v4-xlate-12
draft-ietf-behave-v6v4-xlate-stateful-09
draft-ietf-behave-dns64-08

AD Review

- I have reviewed the 5 documents defining Behave's translator functions
- The documents where of good quality
- The authors have been very good at responding to my questions and resolving most of the raised issues
- Have two technical issues where I like WG input

XLATE

- Text around the population of the v4 protocol field when doing v6->v4
  - Needs to traverse the IPv6 next header chain past known extension headers to ESP, Transport protocol or unknown next header values.

- Regarding handling of upper layer protocols:
  - Known transport protocols with pseudo headers have their checksum recalculated
  - XLATE MUST? forward unknown protocols to avoid blackholing protocols that will work
    - Things that will not work will be dropped by destination as invalid

XLATE

- Avoiding IPv4 ID field Synthesis
  - Needed if DF=0 (no v6 frag header and size <1280) and IPv4 packet bigger than 68 bytes
  - If DF=1 or size <= 68 bytes the IP ID field can be set to 0.
  - draft-touch-intarea-ipv4-unique-id
- Synthesis of IPv4 ID field is tricky for stateless

XLATE

- draft-touch-intarea-ipv4-unique-id-03 says: "Sources emitting non-atomic IPv4 packets SHOULD NOT repeat ID field values within a given source IP, destination IP, and protocol tuple over the period that fragment reordering would affect reassembly."
    - Non-atomic is fragmented or (DF==0 && size > 68)

XLATE

- Synthesis may require per three tuple IP ID field state

  – Required if the translator will not receive frag headers in response to ICMPv6 packet too big

- Managed network can ensure IP ID synthesis isn't necessary

  – Failure causes: Network firewall, Host firewall, or Host misbehavior

  – A managed network is "An IPv6 Network" in the Behave scenarios

XLATE

- Proposal for resolution
  - XLATE document states when IP ID is set to 0
  - Applicability text added to framework

Going Forward

- I will hand over these documents to Dave Harrington
- Hope this resolves all the issues
- Some documents will need updates
- Then it is time for IETF last call