GCCG working group report
– September 22, 2020
Original Activity Proposal -- Objectives

1) Determine if a common set of requirements for Ground-to-Cloud-to-Cloud-to-Ground media essence communications exists.
   - Yes, common requirements exist

2) If common requirements exist, establish a common technical approach (perhaps to be documented in a VSF Technical Recommendation) for communication of media essences from G-C-C-G.
   - Common Requirements Exist
   - Common technical approach seems feasible
   - More than one operating point

VSF September Meeting (Virtual)
Original Activity Proposal -- Tasks

- seek appropriate members to participate in the activity • DONE
- gather requirements through informal communication with other end-customers and cloud providers • DONE
- gather technical stakeholders and draft a technical approach if common requirements exist • WIP
- form the approach into a VSF Technical Recommendation as appropriate • NEXT
What are the “operating points” we see (GC,CG) (for TV)

- Uncompressed (2022-6 or 2110-20) (already defined)
- “Broadcaster Nirvana” – super low latency, super high quality
  - JXS for HD @ (200m?)
  - Dual-path reliability model for super-good reliability @ minimum latency
- J2K-ULL (stripes) @200
- J2K (full-frame) @120
- AVCI @ 100
- H.264 medium-gop managed latency ~20Mbit(HD) (ULL restricted VBV buffer) $$
  - ARQ/RIST or dual-path model or FEC? (Typical 4:2:2/10 profile)
- H.264 very-long-gop (longer latency @ lower rate) (HD@3-10 Mbits, more delay)
  - ARQ/RIST or dual-path model or FEC? (Typical 4:2:0/8 profile)
- Zoom / GoToMeeting / Webex – whatever gets a picture on the screen
  - Internet best-effort reliability work

Focus on these

VSF September Meeting (Virtual)
This (JXS/-22) covers the ultra-low-latency, ultra-high-quality user stories
This (H.264ULL) covers the reasonable-latency, reasonable-bandwidth user stories
Next Meeting of GCCG:
Thursday September 24th