HSSG "Speed" Ad Hoc

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Speed AD HOC Goal

- Decide between 10 Gb/s and ~10 Gb/s
- Attempt to reach consensus
- Formulate HSSG objective motion that has high likelihood of passing (75%)

Status

- Significant discussion narrowed choice to two candidates
  - 10.000 Gb/s
  - 9.58464 Gb/s

- Several straw polls within ad hoc show divided support

Straw Poll Results

	9.58464	10.0000	Both	Other
1st Vote	4	6	2	1
2nd Vote	6	9	1	0
3rd Vote	18	16	0	1
4th Vote	15	27	0	NA

Why 9.58464 is correct

- Enables easier, cheaper direct connection to WAN infrastructure without unduly penalizing performance
- Significant amount of research has already been done for this speed
- 9.58464 is a *magic number* in that it is the data rate for the payload in the SONET system
- Interfaces for adapting 10.000 Gb/s to installed base of lit WANs will make 10 Gig more expensive and complex, thereby limiting scalability

Why 10.000 is correct

- Need 10.0 Gb/s PHY that meets general Ethernet cost parameters
  - Adopting 9.58 is 1st step in adopting SONET PHY with associated higher overhead and enables feature creep
  - Current OC-192 PHYs are too expensive for the Ethernet market
- Speed <10.0 inhibits aggregating lower speed links
- 10.00 Gb/s is integral multiple of system clock used in 10/100/1000
- Changing historical steps of 10x opens Pandora's box of issues on marketing and product acceptance

General Concerns

- Widespread *incorrect* assumption that line code is somehow tied to speed selection

  - 10.000 Gb/s $\Rightarrow$ 8B/10B code $\Rightarrow$ 12.5 Gbaud line rate
  - 9.58464 $\Rightarrow$ Scrambling $\Rightarrow$ <10 Gbaud line rate

- Picking *new* non-standard (i.e.. Non-OC192) line rate will cause delay, increase risk and further fragment component market

- Copper ad hoc may want to add another speed

- Operations and maintenance support may be needed to support WAN application

Options If No Decision

- Don't go forward with PAR
- Have objective requiring delayed decision
- Support both data rates
- Split into two projects with two PARS
- No objective now—delay decision