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Exclusion Band Feedback

Edwin Mallette

RF Spectrum Ad Hoc

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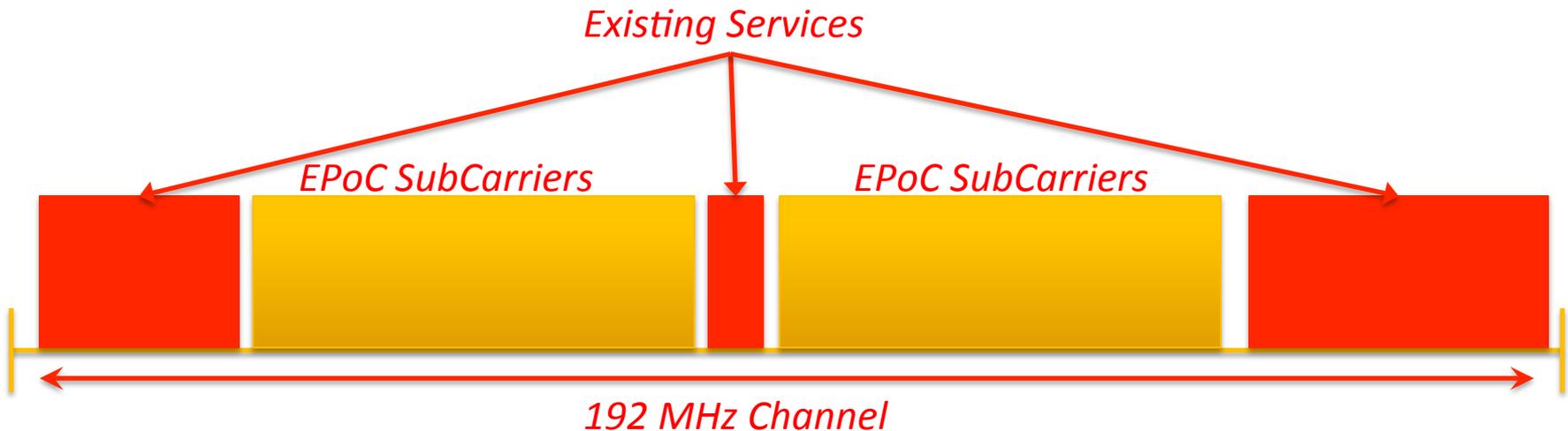


NETWORK ARCHITECTURE AND STRATEGY

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Exclusion Bands Purpose

- © It is understood that exclusion bands are intended to provide the flexibility to work around existing carriers when 192MHz of contiguous spectrum isn't available.
- © It is further understood that exclusion bands are not for the purpose of managing signal interference, burst noise, etc.
- © There are other tools in the EPoC toolbox to handle that such as:
 - Interleaving
 - Muting EPoC sub-carriers (or reducing bit-loading to 0.)



Exclusion Band Detail

- © Thus, as the purpose of an exclusion band is to ensure that the EPoC signal coexists well with existing carriers...
- © Existing carriers could be analog or digital and many have regulatory (FCC in our case) performance requirements.
- © At the same time the desire is to provide the maximum flexibility to ensure efficient use of spectrum.
- © Our belief is that exclusion bands are around to help us address a “temporary” problem.
 - Certainly there’s the problem that maybe 192MHz of spectrum isn’t available, so we would want an exclusion band (on each side) to allow us to operate in less spectrum.
 - There’s also the problem where we may be unable to move a carrier or set of carriers and so might need to work around those carriers for a period of time.
 - This could be 10 years or for the “life of the plant” whichever is longer.
- © In general if we can move carriers around to provide contiguous spectrum (even if less than 192MHz) we will.

Exclusion Band Number and Resolution

- ◎ Number of Exclusion bands per 192MHz channel:
 - The reasonable number of exclusion bands is 6 – one on each side and 4 in the middle.
 - We are agreed that raising the value to a power of 2 makes sense.
 - The number of exclusion bands desired is the same for upstream and downstream channel.
- ◎ Resolution of Exclusion Bands location and width.
 - Our belief is that 1MHz is far too coarse an instrument.
 - The resolution of the exclusion band should be no greater than 100kHz. 50kHz would be even better.
 - The desired resolution is the same for downstream and upstream.
- ◎ An important note is that any required guard band orphans usable bandwidth for all services.



Questions?

