

Connect. Manage. **Grow.**

# Exclusion Band Feedback

*Edwin Mallette*

RF Spectrum Ad Hoc

April 2, 2013

**bright house**  
NETWORKS

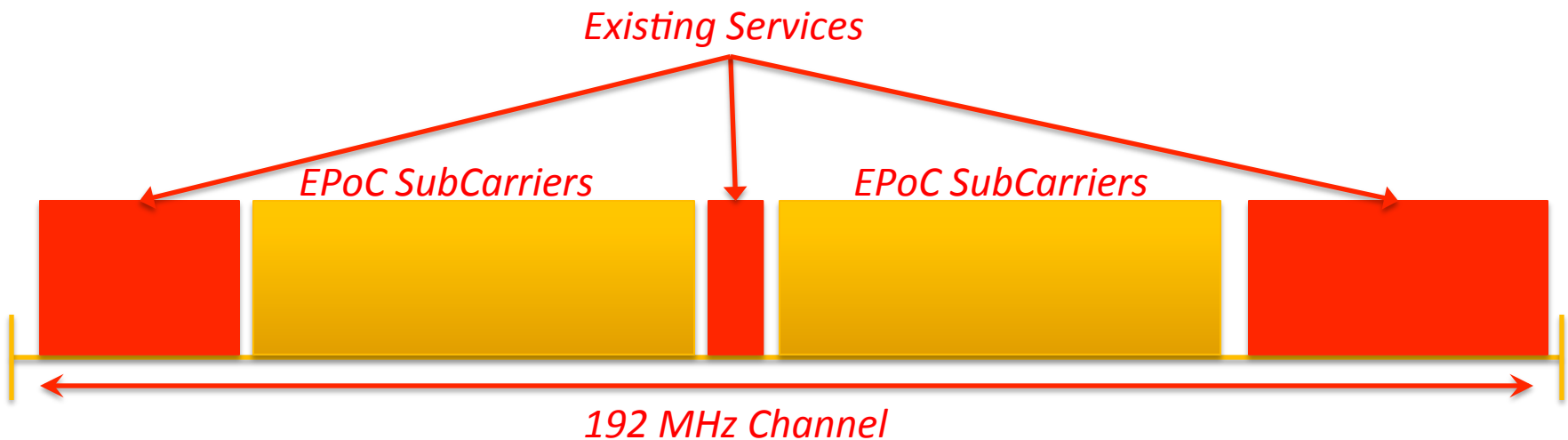


*NETWORK ARCHITECTURE AND STRATEGY*

[www.brightbiz.com](http://www.brightbiz.com)

# 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?

