A rough workplan “nudge” to 100G, 50G, and 25G NGEPON

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Getting to Task Force Draft 1.0

Need baseline material -> need to start completing

- The process of getting our work done involves:
  1. Making decisions
     - Adopt baseline proposals
       - Refine baselines and draft 0.x text
     - Editor moves material into Draft 0.x
       - Note: editors edit, no technical creation, baselines need to be technically sufficient
     - Iterate
  2. Create Draft 1.0 (Task Force Draft)
  3. Continue making decisions
     - Adopt baseline proposals
     - Modify Draft 1.x via comment processes
     - Iterate
     - Technically complete?
  4. Working Group ballot

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My Observations and My Nudge

My Observations, mostly on PCS/PMD:

- Very few baseline proposals are coming in
- Excellent studies on PMD issues
- Lot of focus on 25G optimized
- Potentially stuck in presentation / discussion iterations
- Dancing around 4-pair wavelength plan
- Bonding and fragmentation proceeding iteratively (only baseline proposal!)
- Some discussions haven’t been including system impact review

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My Observations and My Nudge

Reality:

1. Analogy: like boarding a plane with 25G, 50G, and 100G passengers
   - The plane (our TF Draft) cannot “take off” until everyone is on board
2. The 100G 4-pair wavelength plan (“**4**”) “the big gorilla to fit on the plane”
   - More complex, large system impact
   - No baselines or baseline proposals at this time

My Nudge for the PCS / PMD:

- Avoid making early iterative/singular TF decisions that may have to be revisited (changed) in order to make the 4-pair plan work and meet system requirements.
  - Early technical decisions can be difficult to change
- Include decisions as part of more complete baseline proposals, baseline text
- Shift focus on building 4-pair wavelength baseline proposals
  - 25G optimized will be more clear and should “fall out” of the adopted baseline material

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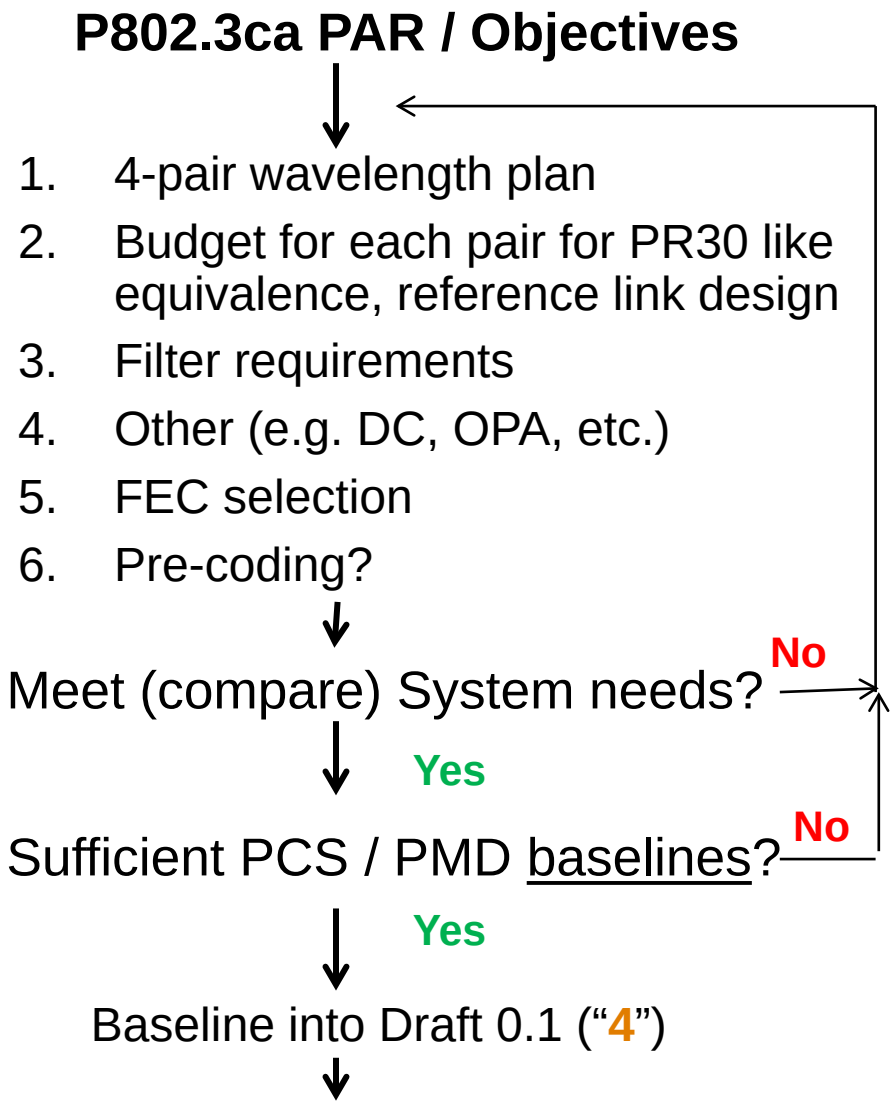
TF Decisions work (not strict serialization, items can be done in parallel !!)



System Evaluation Criteria, e.g.:

- OLT Impact, e.g.:
  - Power
  - Port Density, facilities, rack space impact
- Remote OLT Impact, e.g.:
  - Power
  - Packaging
- ONU Impact, e.g.:
  - Power
  - Relative Cost
- Distance / Spit Ratio requirements
- Deployment practice and impact
- Coexistence

Other

- Optimized 25G options?

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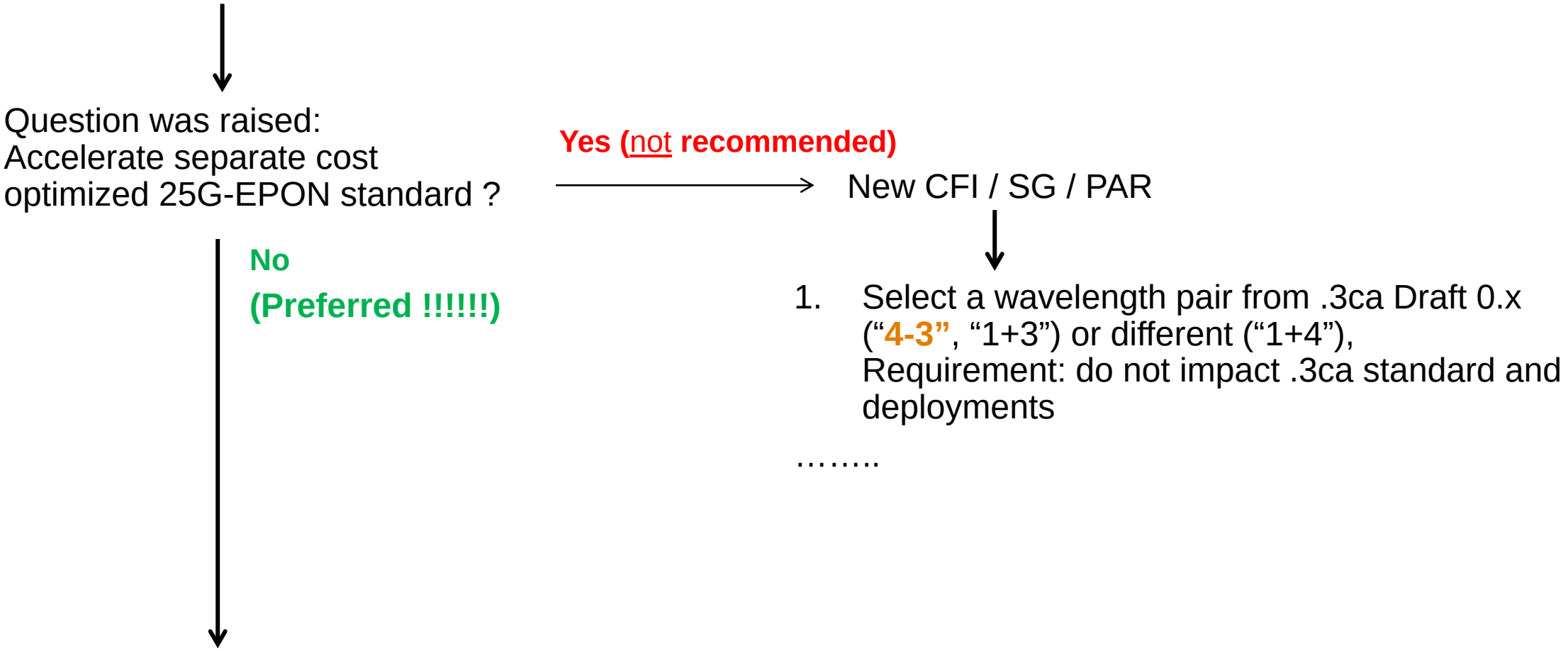
TF PHY Decisions work (not strict serialization, some items can be done in parallel)



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TF Decisions work (not strict serialization, some items can be done in parallel)

1. Channel Bonding (RS / MPCP+ impact?)
2. Fragmentation? (RS / PCS impact?)
3. Configuration model for 100G, 50G, 25G, and other options (e.g., kramer_3ca_1_0716.pdf model)
4. (de) Skew
5. PR10, PR20, PR40? equiv. budgets
6. Further cost reduced 25G?
    1. Select a wavelength pair from .3ca Draft 0.1 (“**4-3**”, “1+3”) or different (“1+4”)
    2. Optimized link budget(s) for lower rel cost

Meets system needs?

No

Yes

System Evaluation Criteria, e.g.:

- OLT Impact
- Remote OLT Impact
- ONU Impact
- Migration path requirements
    - 10G to 25G
    - 25G to 50G
    - 50G to 100G
- Distance / Spit Ratio requirements
- Coexistence
- Deployment practice and impact
    - Optimized 25G issues

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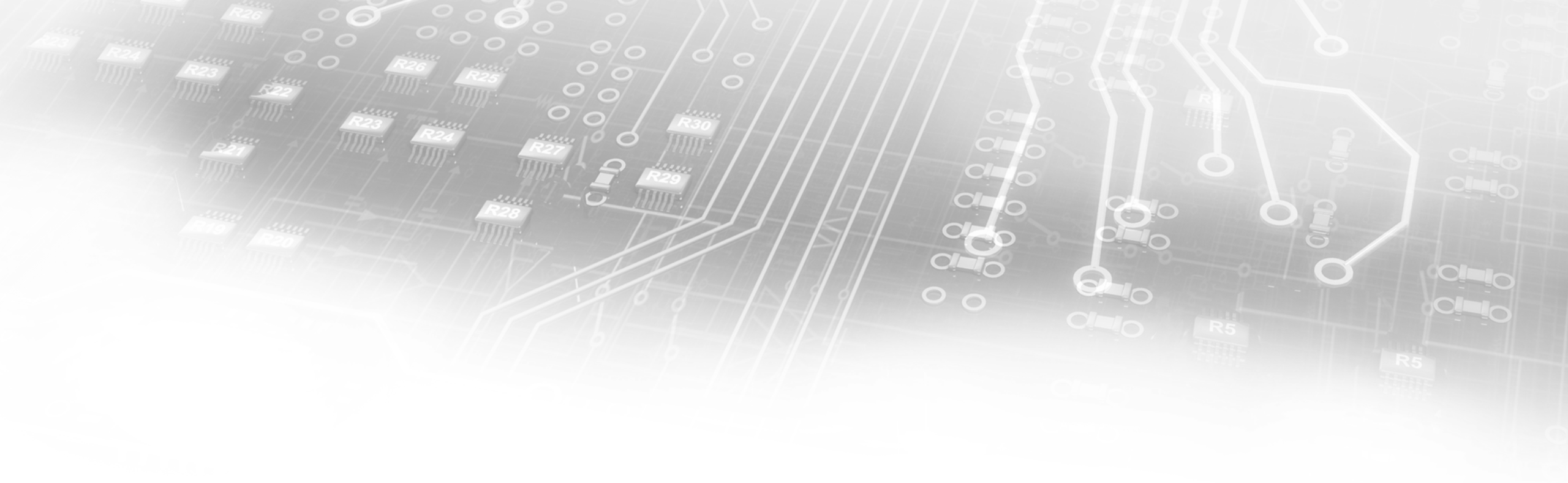

Thank You

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