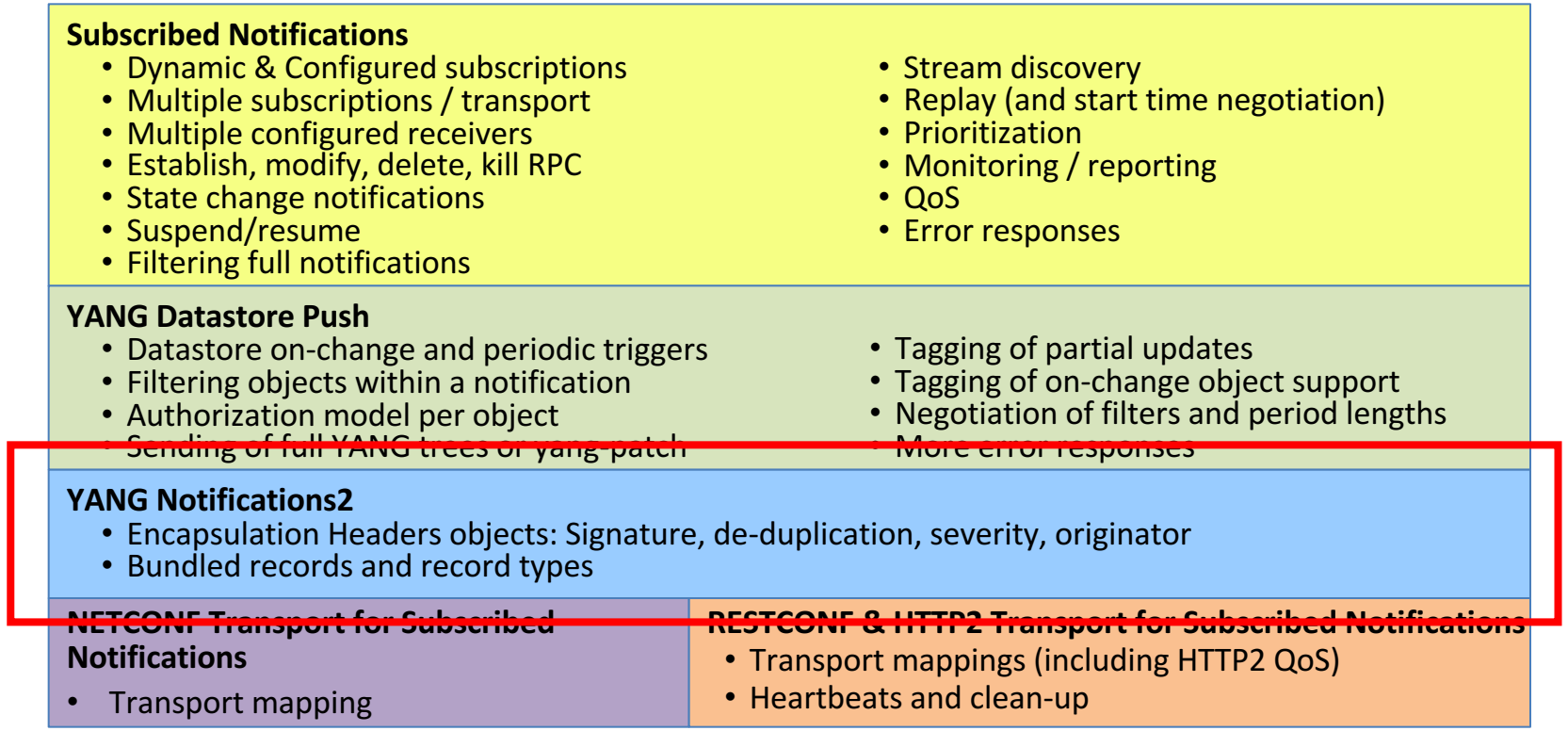
Notification Message Headers and Bundles

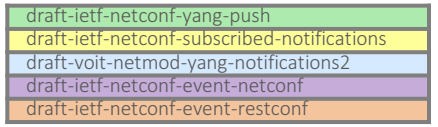
draft-voit-netconf-notification-messages-01

Eric Voit, Andy Bierman, Alexander Clemm, Tim Jenkins

Functionality per Draft



Legend



Purpose

- Create a way to “bundle” multiple update and notification records into a single notification message
- Allow to combine updates from multiple subscriptions into a single notification
- Distinguish between what goes into the “record”, and what goes into the “bundle”
  - Record contents distinguished from wrapper that it is contained in
  - Wrapper can be single notification message (one record), or bundled-notification message (multiple records)

#1 Transport Agnostic Header Objects

```
+---n notification-message
       +--ro notification-message-header
       |  +--ro record-time
       |  +--ro record-type?
       |  +--ro subscription-id*
       |  +--ro record-id?
       |  +--ro observation-domain-id?
       |  +--ro notification-id?
       |  +--ro notification-time?
       |  +--ro previous-notification-id?
       |  +--ro dscp?
       |  +--ro message-generator-id?
       |  +--ro signature?
       +--ro receiver-record-contents?
```

To deal with the possibility of distributed subscriptions involving notifications/streams from multiple line cards.
Touch points w/ draft-zheng-netconf-udp-pub-channel-00

#2 bundling multiple notifications into a single transportable message

```
+---n bundled-notification-message
     +--ro bundled-notification-message-header
     |  +--ro notification-id?
     |  +--ro notification-time
     |  +--ro previous-notification-id?
     |  +--ro dscp?
     |  +--ro message-generator-id?
     |  +--ro signature?
     |  +--ro record-count?
     +--ro notification-records*
        +--ro notification-record-header
        |  +--ro record-time
        |  +--ro record-type?
        |  +--ro subscription-id*
        |  +--ro record-id?
        |  +--ro observation-domain-id?
        +--ro receiver-record-contents?
```

Next steps

- Refinements to data model
  - Some fields are overspecified and may not be needed → cleanup
    e.g. various time stamps
- Synchronization/alignment with the concept of multiple message generators for a subscription
  - Separation of concerns: decoupling bundling, common headers, and loss detection
- Ask for WG adoption