U-BIER: Unmasked BIER
draft-zzhang-bier-unmasked-bier-00

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Problem

- Mentioned by previous drafts
- BIER over large BFR-ID space when addressing few receivers can degrade into ingress replication
  - Map/reduce
  - RAID Applications
  - Distributed Elections/Locking
- As example, 16 receivers in a 65K/256bits BFR-ID space
  
  \[
  \frac{p'_{16}(256)}{p_{16}(256)} \approx 0.4
  \]
Unmasked BIER

- Interpret BIER bitmask as sequence of BFR-IDs
  - Repetition Allowed = One Replication
  - Invalid BFR-ID Allowed Anywhere = Ignore
  - Not Sorted
- Binding Label/Whatever signalled in sub-sub-TLV <MT,SD,BML>
  - Concept of Set Vanishes
More Subtle Things

- We _could_ mix U-BIER and standard brew in same subdomain
  - Harder to decode in the middle than normal BIER
- A U-BIER subdomain _could_ shadow a normal BIER subdomain
  - Compression to U-BIER/decompression at each node possible
  - Compression harder since frames need buffering
- Problem of Optimal Replication Point (Branching)