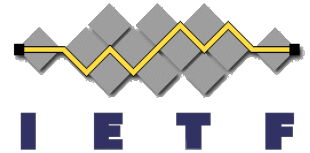


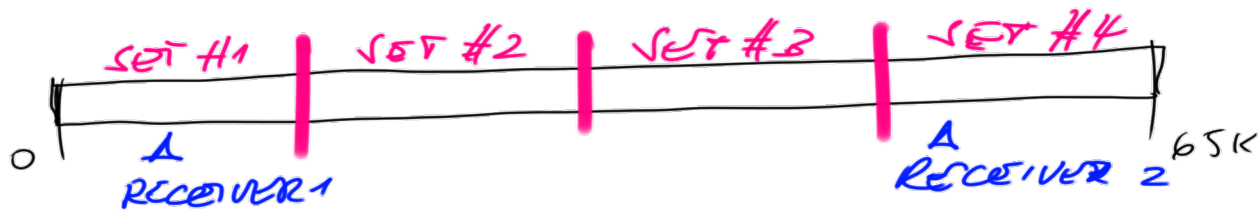
U-BIER: Unmasked BIER
draft-zzhang-bier-unmasked-bier-00
IETF 120

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Problem

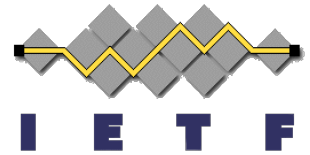
- Mentioned by previous drafts
- BIER over large BFR-ID space when addressing few receivers can degrade into ingress replication
 - Map/reduce
 - RAID Applications
 - Distributed Elections/Locking
- As example, 16 receivers in a 65K/256bits BFR-ID space
 likelihood for full ingress replication is $\frac{P'_{16}(256)}{P_{16}(256)}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



ALL	INGRESS
11 12 13 14	12 13 14
22 23 24	23 24
32 34	34
44 = 10	= 6

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)