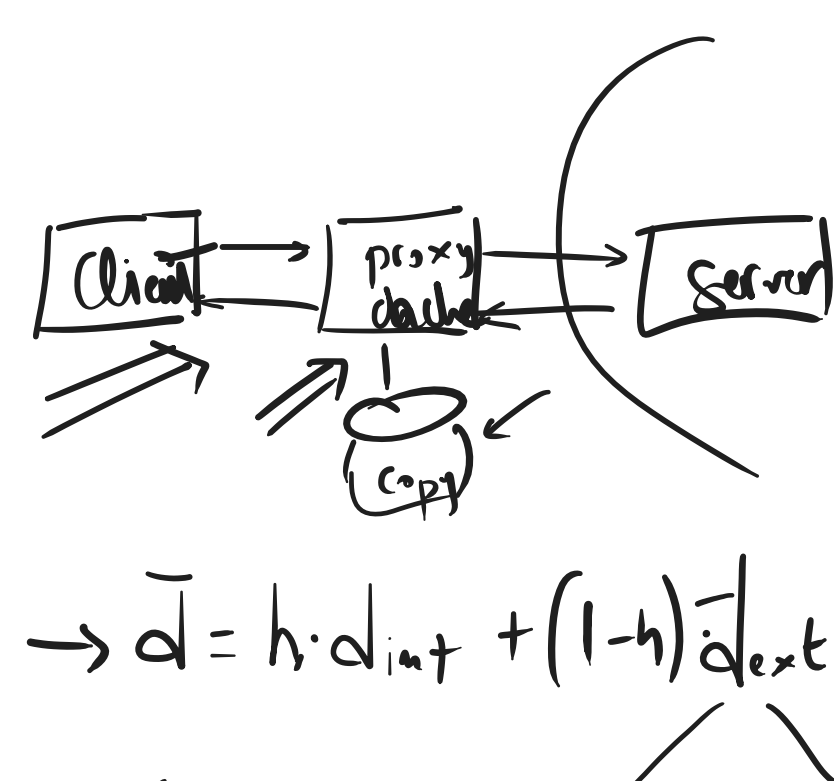


Ευαγγελία στο H2P
 proxy caching
 CDN
 cooperative caching
 P2P

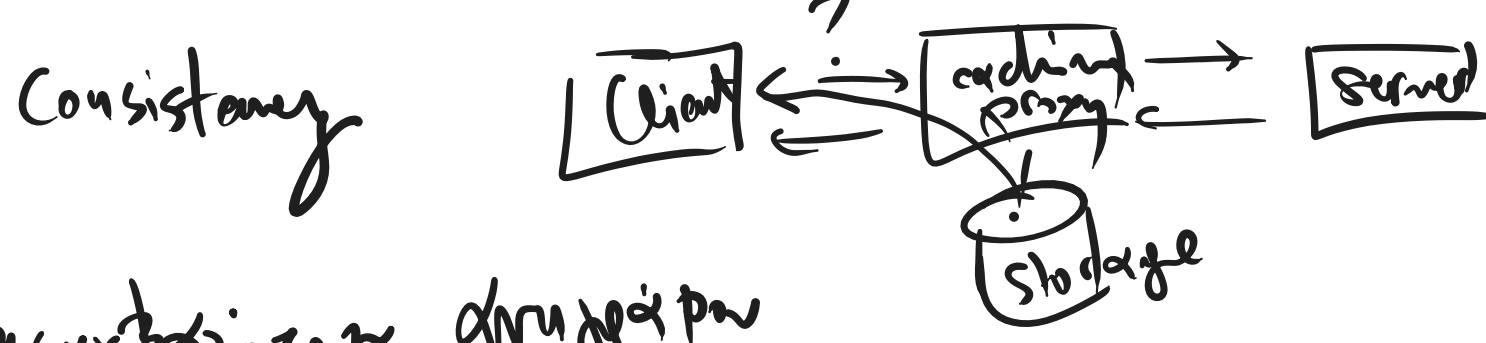


$$\bar{d} = h \cdot d_{int} + (1-h) \cdot d_{ext}$$

$$\bar{d} = h \cdot d_{int} + (1-h) \cdot (p_1 \cdot d_1 + p_2 \cdot d_2)$$

transparency elasticity

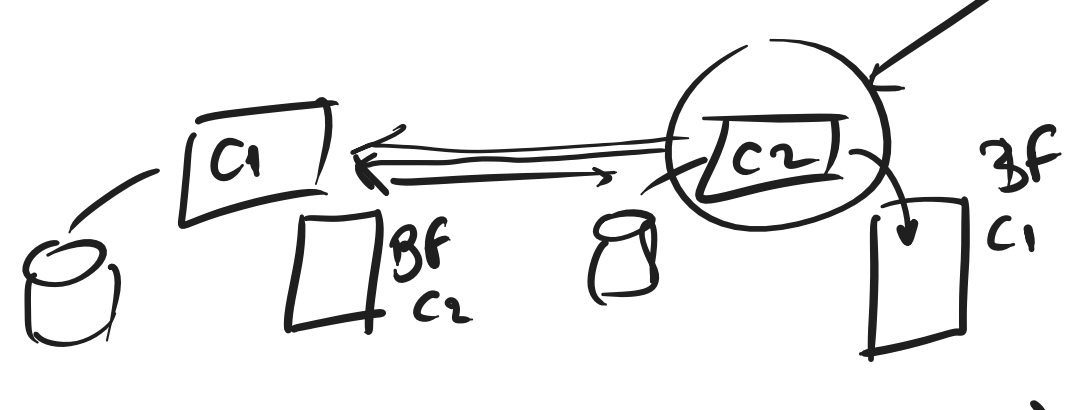
cache replacement: algorithmos, xipos
 new cache? 99
 συμπεριφορά πόντων
 xipos για νέες αλλαγές



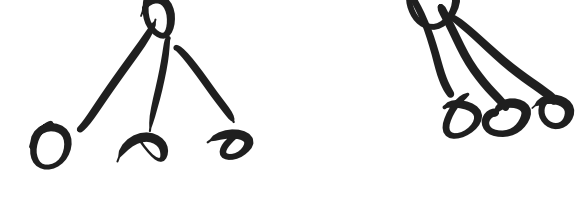
consistency
 ασυμμετρική δραστηριότητα
 (cache) no no αλληλεπίδραση → consistency miss
 stale deliveries

cooperative caching
 - arrays
 - hierarchies
 - cache digests

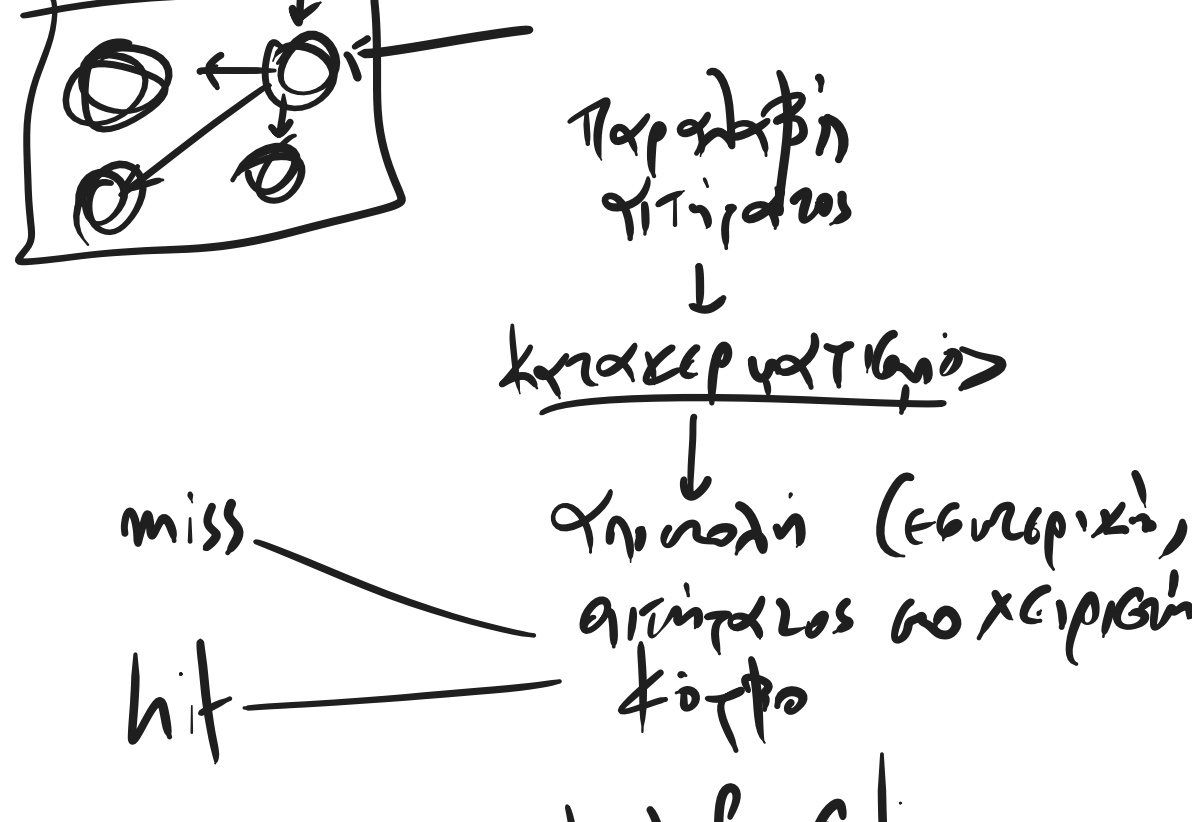
Bloom Filter



Internet Cache protocol (ICP)
 suggests approach to H2P



Cache Arrays



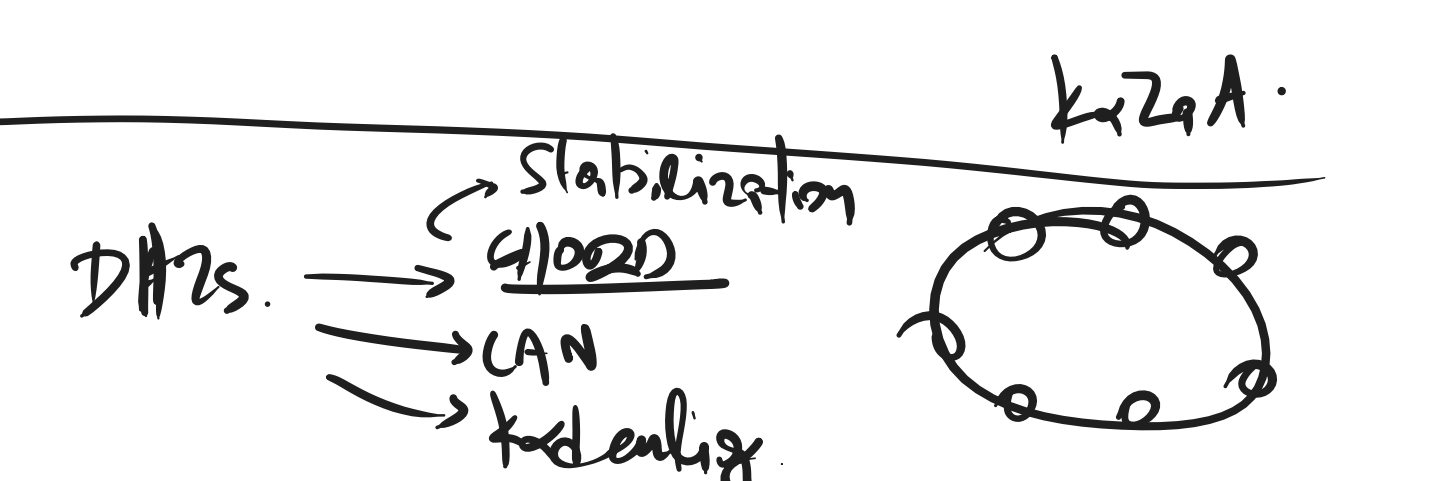
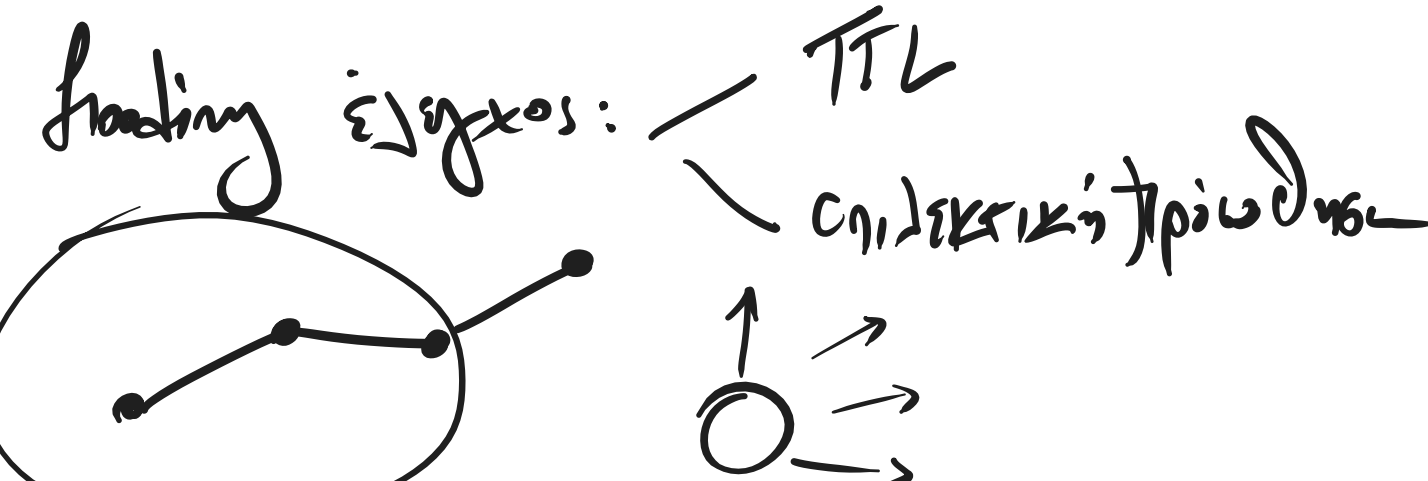
distributed cache → algorithmos hash function
 prediction in distributed cache
 ποσοστό αλληλεπίδρασης ανά κείμενο, τη θέση του

$$\begin{aligned} h(URL_1) &\rightarrow 0.3 \\ h'(URL_1) &\rightarrow 0.4 \end{aligned} \quad \left(\frac{h}{h'} \right) : \text{disruption factor}$$

$$\begin{aligned} h &= 0.4 \text{ (better performance)} \\ h' &= 0.1 \\ \text{6000 x 4 x ipoi (+ 4000 x ipoi)} &= \frac{4-1}{4} = 75\% \end{aligned}$$

P2P: centralized, decentralized, dec. centralized, distributed, unstructured, structured (DHT)

BitTorrent: Gnuttella → flooding, constrained flooding

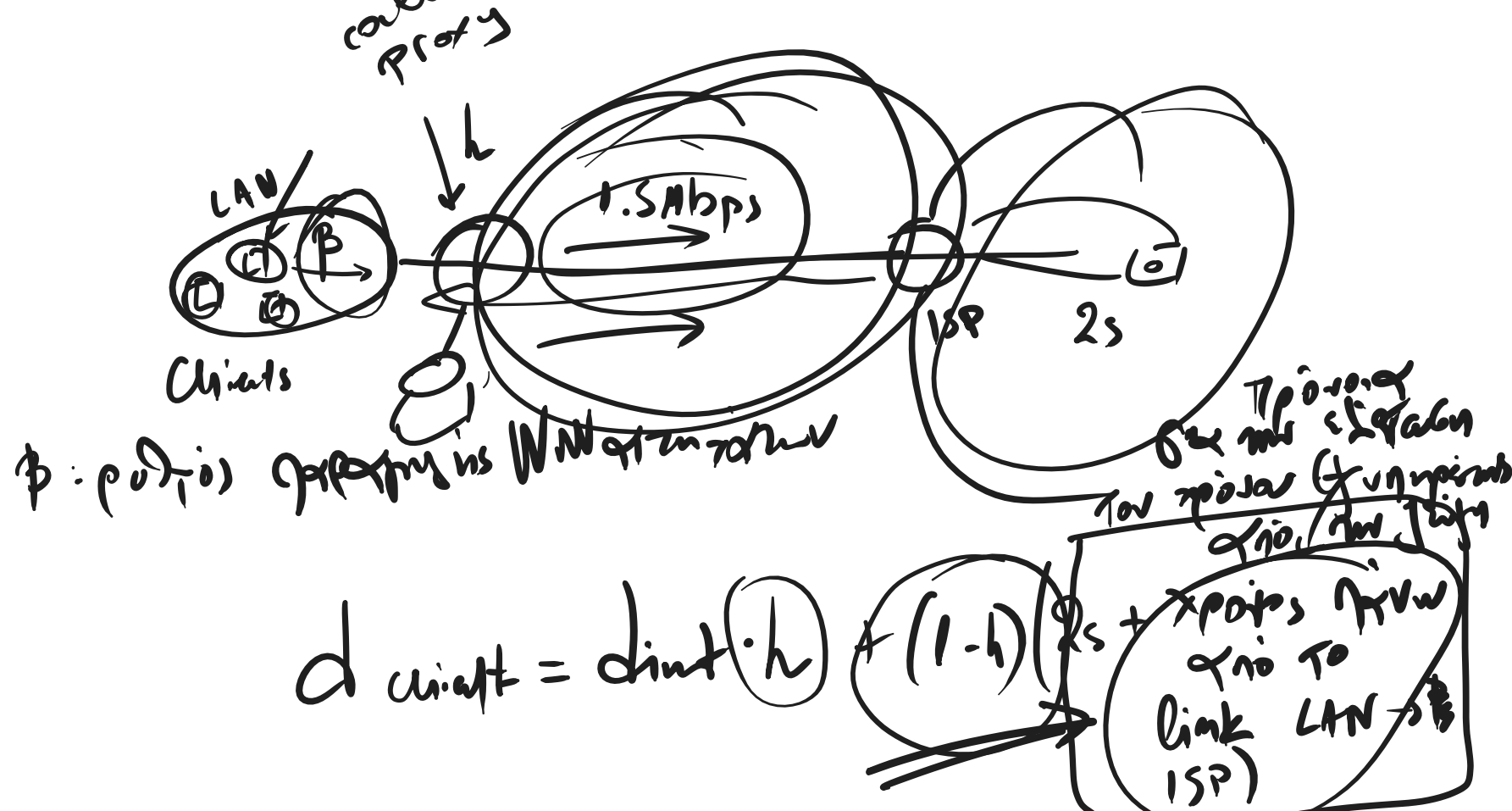


kademlia: XOR distance, consistent hashing

k-buckets → nearest neighbors, least recently seen
 CHORD → replication, linear, scalable, scalable cache

BitTorrent: random piece first, sequential first, first in C.

Natfix



$$d_{client} = d_{int} \cdot h + (1-h) \cdot d_s + \text{link LAN to ISP}$$

