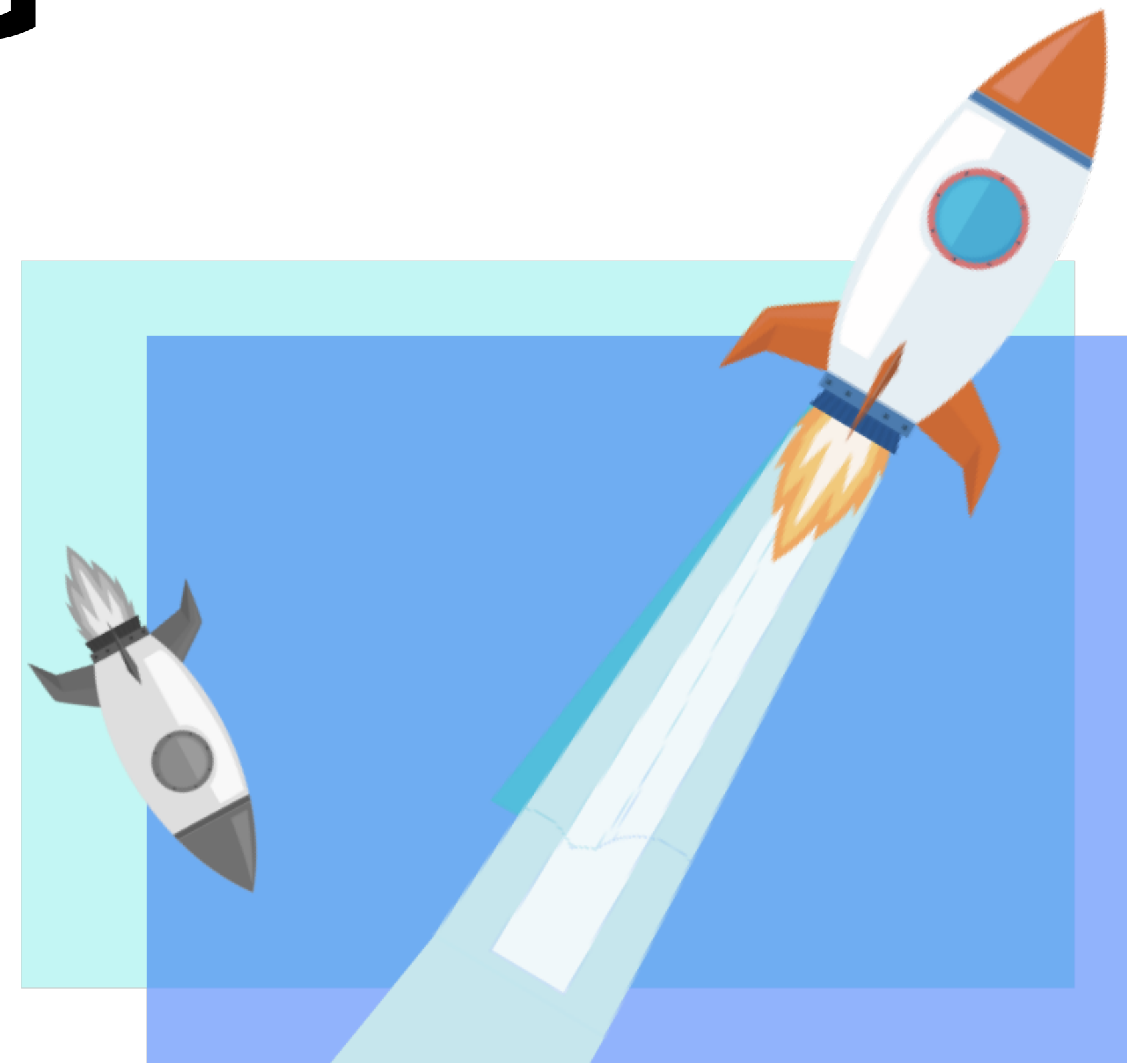# Keeping up with the IETF DNSOP WG

Benno Overeinder

The DNS Universe @ IETF

DOH 2017

DANE 2010

DNSEXT 1999

DNSOP 1999

ADD 2020

DPRIVE 2014

The DNS Universe @ IETF

In 1999:

- DNS Operations (DNSOP) WG

  - operational guidelines for effective and correct management

  - DNSSEC & IPv4/IPv6 operational procedures

  - document operations of the root and TLD services, and DNS resolvers

- DNS Extensions (DNSEXT) WG

  - changes to DNS protocol on the wire

  - changes to internal processing of DNS data

time warp

The DNS Universe @ IETF

In 2020:

- DNSOP

  - operational guidelines for effective and correct management

  - DNSSEC & IPv4/IPv6 operational procedures

  - extending or performing protocol maintenance

  - home for existing & new DNS issues

  - coordinating activities related with DNS root, naming scopes, and special names registry, etc.

The DNS Universe @ IETF

In 2020 (cont'd):

- DNS Private Exchange (DPRIVE) WG

  - development of mechanisms that provide confidentiality and authentication to the DNS

  - define operational, policy, and security considerations for DNS operators

- ADD

  - define a mechanism to discover DNS resolvers, including support for selection decisions by clients

  - develop an informational document how to manage selection of DNS resolvers

DNSOP WG Activities in 2020

DNSOP WG 2020 in Clusters

MAINTENANCE

PROVISIONING & DEPLOYMENT

OPERATIONAL GUIDELINES

RESILIENCE

SECURITY

PROVISIONING & DEPLOYMENT

Working group activities related with deploying and running DNS services

- Rolling out services

  - RFC 8901: multi-signer DNSSEC models

  - YANG types for DNS classes & RR types

  - DNS catalog zones

  - RFC 8906: failure to communicate

- Zone & operational consistency

  - Glue in DNS referral response is not optional

  - Delegation revalidation

  - DNS TIMEOUT RRs
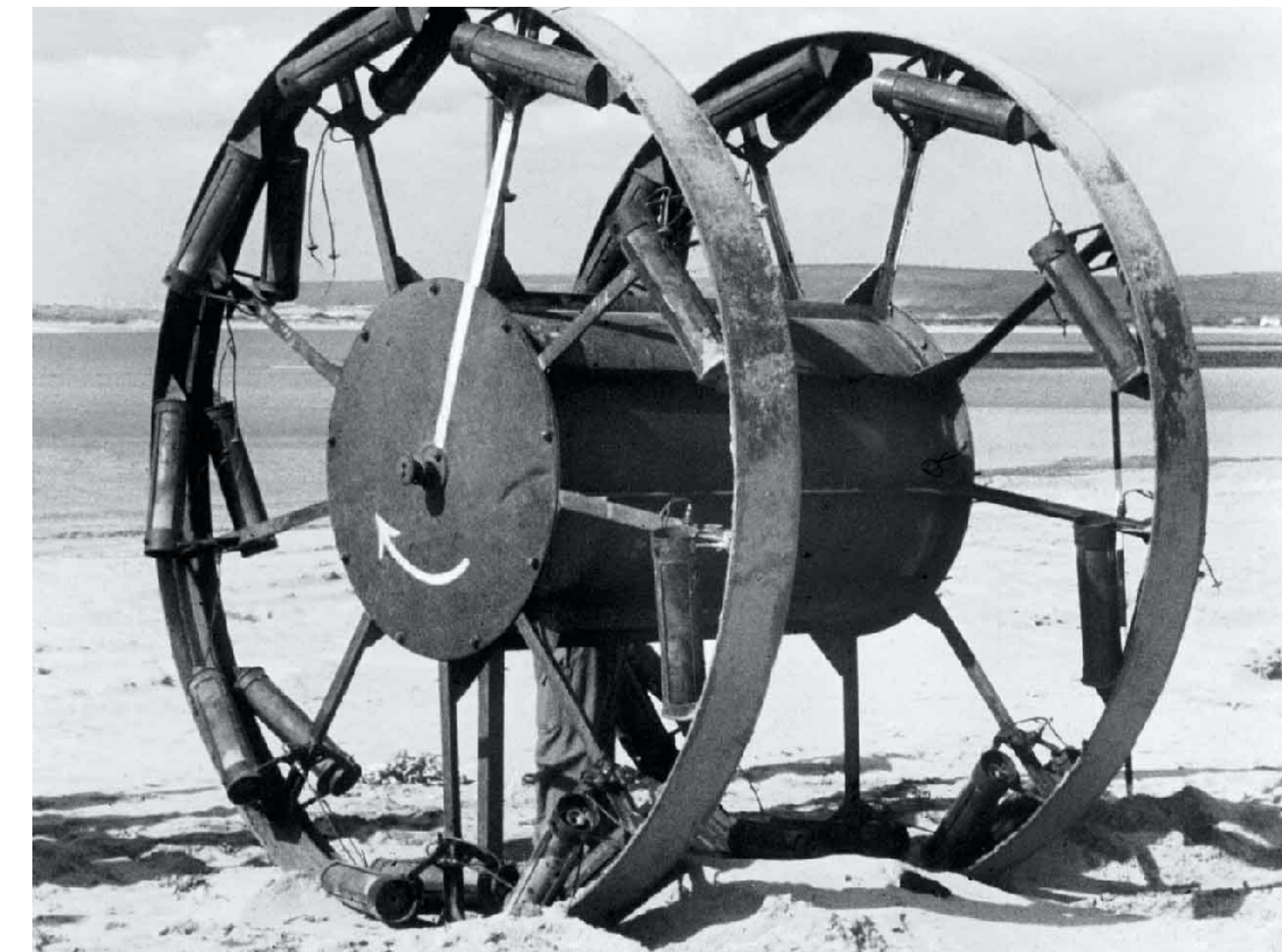
RESILIENCE

Keeping DNS services available and responsive (in the face of hazardous Internet conditions)

- Availability under DDoS attack, or diminished network services

  - RFC 8806: running a root server local to a resolver

  - RFC 8767: serving stale data to improve DNS resiliency

  - DNS server cookies

- Avoidance/recovering

  - Fragmentation avoidance in DNS

  - Extended DNS errors

SECURITY

Security and hardening of DNS service

- Message digest for DNS zones (ZONEMD RR)

- The DELEGATION_ONLY DNSKEY flag

MAINTENANCE (-BIS)

Maintenance of protocols, -bis documents

- RFC2845-bis: Secret key transaction auth... (TSIG)

- RFC5933-bis: Use of GOST 2012 ...

- RFC8499-ter: Terminology for DNS ...

- RFC7816-bis: DNS qname minimisation to ...

OPERATIONAL GUIDELINES AND REQUIREMENTS

Documentation of operational guidelines and requirement

- DNS-over-TCP: operational requirements

- Recommendations for DNSSEC resolver operators

THANK YOU
&
QUESTIONS?