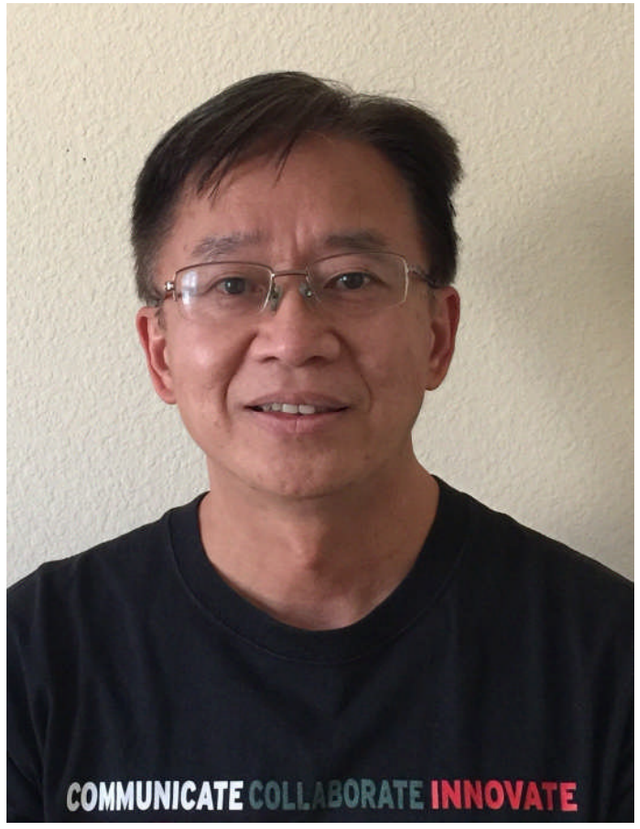
Internet Ossification and Solution

paper: On the Study of Internet Ossification and Solution
Lin Han, Richard Li

Lin Han
Distinguished Engineer
Futurewei Technologies Inc.

Bio: Lin Han

- Professional Experience
  - Distinguished Engineer, Futurewei Technologies, U.S.A (2019-Present)
  - Principal Engineer, Huawei U.S.A (2011-2019)
  - Technical Leader, Cisco Systems, U.S.A (1999-2011)
  - Software Engineer, Newbridge Network, Canada (1996-1999)
  - Engineer, Electronics Research Institute, Southeast Univ., China (1988-1994)
- Research Interest
  - Explore new network technologies for future Internet, including architecture, protocol, 5G and beyond, NTN integration, satellite networking.
- Activities
  - Work for “Focus Group on Technologies for Network 2030” in ITU, 2019
  - Rapporteur of ETSI NGP “Network Layer Multi-Path” WI, 2018
  - Rapporteur of ETSI NGP “New Transport Technology” WI, 2017
  - Papers for IEEE conference and More than 20 USA Patents
- Education
  - Master in Science, EECE, University of Toronto, Canada (1996)
  - Master in Electronics, EE, Southeast University, China (1988)



Abstraction

Internet has become indispensable part for every aspects of modern society. Current Internet is based on IPv4 and IPv6. It has been in service for many years and is very successful.

However, internet is facing challenges in protocol ossification, security, and service quality. The integrity of internet is facing threats from geopolitical tension, trading confrontations, regulation for data protection and localization. Divided internet and internet islands could happen.

This presentation will overview the key blocks and technologies for Internet, analyze the factors for the Internet ossification and proposes a new architecture that is distributed based on region or country. It can maintain the support of the current IPv4/IPv6, and provide more flexibility for the protocol, thus mitigate the ossification for the Internet.