OUTLINE OF DSTAC REPORT
DRAFT: 4/12/2015

❖ Statutory assignment
  ➢ Assignment: “Identify, report, and recommend performance objectives, technical capabilities, and technical standards of a not unduly burdensome, uniform, and technology- and platform-neutral software-based downloadable security system designed to promote the competitive availability of navigation devices in furtherance of section 629 of the Communications Act of 1934.”
  ➢ FCC organized the working group as DSTAC with charter for this assignment.

❖ Background

❖ Technology- and platform-neutral
  ➢ Technologies and platforms in use for delivering MVPD/OTT service
    ▪ Cable technologies
    ▪ Satellite technologies
    ▪ FiOS
    ▪ IPTV
    ▪ OTT and IP
  ➢ Current devices and methods for devices to access MVPD/OTT service
    1. Tablets in home
    2. Connected mobile devices
    3. Take-and-go mobile devices
    4. Gaming stations
    5. VidiPath
    6. RVU
    7. PC/Mac
    8. W3C compliant browser (HTML5 & EME)
    9. CableCARD
    10. Worldbox
    11. Gateway-client
    12. (etc.)
  ➢ Trends in technologies and platforms

❖ Software-based downloadable security system
  ➢ Current security systems in use; protections against threats and risks
  ➢ Trends in security systems
  ➢ Security and operational requirements for software-based downloadable security system: [for
A: Supported cryptographic algorithm(s), e.g. ISO Common Encryption AES-128
B: Existence of hardware root of trust
C: Trusted execution environment
D: Protected video path and output control (types of device outputs)
E: Secure software download and the use of signed code
F: Secure boot process
G: Device authentication and registration
H: Revocation and renewability
I: Tamper and jailbreak detection
J: Watermarking capability
K: HTML5 + EME, MSE, Web Cryptography
...
Z: ___

Uniform

- Capabilities and limitations of current and emerging devices and video delivery platforms to adopt uniform security system
- Threat target of creating a uniform security system

Designed to promote the competitive availability of navigation devices in furtherance of section 629

- Section 629
  - Section 629 addresses commercial availability of “equipment used by consumers to access multichannel video programming and other services offered over multichannel video programming systems” from unaffiliated sources.
  - Section 629 rules may not “jeopardize security of multichannel video programming and other services offered over multichannel video programming systems, or impede the legal rights of a provider of such services to prevent theft of service.”
  - Congressional directive that the FCC “avoid actions which could have the effect of freezing or chilling the development of new technologies and services.”
- Effect of software-based downloadable security system on promoting availability of navigation devices

Not unduly burdensome

- Application and evaluation of security and operational requirements for software-based downloadable security system to:
  1. Tablets in home
  2. Connected mobile devices
  3. Take-and-go mobile devices
  4. Gaming stations
  5. VidiPath
  6. RVU
7. PC/Mac
8. W3C compliant browser (HTML5 & EME)
9. CableCARD
10. Worldbox
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12. (etc.)

➢ Summary evaluation
  ▪ Effect on current distribution technologies
  ▪ Effect on security
  ▪ Effect on development of new technologies and services
  ▪ Effect on third-party retail devices
  ▪ Consider implementation cost; operational complexity (bandwidth); power (energy); IP and license; legacy device "emulation" of new CAS; actual security of the system.

❖ Recommendations for performance objectives, technical capabilities, and technical standards
  ➢ Performance Objectives & Technical Capabilities
    ▪ Video providers - TBD
    ▪ Retail Devices - TBD
    ▪ Currently available solutions – TBD
    ▪ Near term solutions - TBD
  ➢ Technical Standards.
    ▪ TBD - [Leverage existing multi-industry technical standards, such as DLNA VidiPath, RVU, W3C HTML5 & EME, etc. ]

❖ Conclusion.
❖ Appendices