

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

example]

- 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
11. Gateway-client
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