



October 24, 2003

FILED ELECTRONICALLY

Ms. Marlene H. Dortch  
Office of the Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: Ex Parte Presentation—MB Docket No. 02-230

Dear Ms. Dortch:

Transmitted herewith for filing in the above-referenced proceeding regarding digital broadcast copy protection is the attached document “Functional Specifications to Implement the Broadcast Flag Submitted by Dell, Inc.” These functional specifications provide additional information to follow up on a meeting that Dell had with Commissioner Abernathy and her staff on October 20, 2003. In that discussion, Dell recommended that in the event the Commission adopts a “broadcast flag” approach, notwithstanding the jurisdictional and other legal and policy concerns it raises,<sup>1</sup> then the Commission should incorporate into its decision a set of functional specifications to provide guidance for the development of technologies to address the broadcast flag. Dell further stressed its concerns regarding technology mandates in general, and urged the Commission to limit its role to the creation of a conceptual framework carefully designed and narrowly tailored to support the implementation of industry consensus-based rights management technologies.

By “functional specification,” Dell means a specification that defines a high-level framework outlining specific goals and objectives, without dictating or in any way preordaining the methods, processes and approaches that may be used to achieve those goals. The framework Dell recommends would provide guidance to the entire range of PC and CE designers and manufacturers regarding the goals and objectives their technologies should be designed against in order to address the broadcast flag. The use of such clearly articulated and flexible specifications is essential to assuring innovation and evolution of technology solutions for the protection of digital broadcast content. For example, the attached specifications contemplate the development of competing software

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<sup>1</sup> See, e.g., Comments of the IT Coalition, MB Docket No. 02-230 (filed Dec. 6, 2002) and Reply Comments of the IT Coalition, MB Docket No. 02-230 (filed Feb. 19, 2003). Dell is a member company of the IT Coalition.

and hardware solutions and combinations thereof. In a broadcast flag approach, these functional specifications are necessary to recognize rapidly evolving PC and CE convergence, and to foster the development of multiple competing, innovative technologies for the broadcast flag that can be adapted for use in the open architecture PC family of devices as well as CE devices.

The attached paper describes six functional specifications that Dell believes the Commission should include in any adopted broadcast flag approach: Scope, Security, Strength/Robustness, Rights, Authentication, and Revocation. Dell recognizes that the success and continuing improvement of PC and CE technologies addressing the broadcast flag will also be influenced by other factors--including Interoperability, Performance and Renewability--all of which play a critical role. However, Dell submits that these criteria are best left to development through the operation of the open, competitive marketplace.

In summary, the attached paper amplifies Dell's view that if the Commission adopts the broadcast flag approach, it will not serve the public interest if the Commission's order fails to outline a framework of Functional Specifications (as Dell has specifically defined the term above). Again, this framework should be narrowly tailored to the defined purposes of the broadcast flag. Any potential creators of PC or CE -oriented technological solutions addressing the broadcast flag should be able to design and test their products against these Functional Specifications.

In addition to filing one electronic copy of this letter with the Commission for the above-referenced docket, a copy of this letter is being delivered to each of the Commission parties listed below.

Respectfully submitted,

Richard A. Beutel, Esq.  
Director, Government Relations

Attachment

cc (w/ attachment): Commissioner Kathleen Abernathy  
Stacy Robinson Fuller  
Rick Chessen (Media Bureau)

# **Functional Specifications To Implement the Broadcast Flag**

**Submitted by Dell, Inc.**

## **Background:**

A joint working group comprised of representatives from the consumer electronics industry, IT industry and content industry are to be commended for the significant progress made over the course of many meetings on the difficult task of defining how best to address the threat of digital piracy for over-the-air digital broadcasting.

The dialogue, while incomplete, was successful regarding the use of the so-called Broadcast Flag as a vehicle for partially addressing this purpose. Left for future discussion were many issues, including the specific means by which digital devices “processed,” “acknowledged” or “enforced” the Broadcast Flag.

Several candidate technologies were identified as having promise in this regard; however Dell is of the view that any regulations that address these issues are incomplete without the inclusion of flexible, clearly articulated functional expectations (“Functional Specifications”) which are broad enough to encompass newly emerging and innovative approaches to the Broadcast Flag problem yet clear enough to allow multiple vendors to develop and submit protection solutions. By “Functional Specification,” Dell means a Specification that defines a high level framework outlining specific goals and objectives, without dictating or in any way preordaining the methods, processes and approaches that may be used to achieve those goals. Only by use of such a flexible Specification can the innovation and evolution of technology be assured. Functional Specifications are necessary to: (1) avoid chilling the development of newly emerging technologies; (2) avoid the regulatory codification of specific technologies; and (3) avoid the creation of de facto (but not necessarily the best) standards to meet these goals.

Dell has set forth guidelines for Functional Specifications. These Specifications would be used to describe appropriate technical solutions to address the Broadcast Flag. The process by which these technologies become “approved”, whether by some FCC review process or neutral 3<sup>rd</sup> party review is not addressed.

Dell believes there should be no prejudgment on the means by which each Functional Specification is implemented provided that each is adequately addressed. Rather, certification should be dependent on the efficacy of the technology as a whole, together with associated terms and conditions governing the use of the technology in devices.

Thus, a technology may be certified providing “affirmative and reasonable constraints” (e.g., added to Table A) by meeting the following Functional Specifications:

1. **Scope:** The content protection method must prevent the unauthorized redistribution of digital television broadcasts to the public when such an interest in securing protection is signaled by use of a broadcast flag.
2. **Security:** A content protection method must protect Marked and Unscreened Content, in conformance with the Compliance Requirements, when such content is transmitted among or recorded by consumer devices, including but not limited to TV's, set-top boxes, game consoles and personal video recorders as well as general-purpose devices such as PCs. A content protection method may be implemented in hardware or software or in any combination of the two. In conformance with the Robustness Requirements, defeating the content protection method must be beyond the capability of the ordinary user, using commonly available tools.
3. **Strength/Robustness:** The encryption algorithm must be such that detailed knowledge of a given implementation of the algorithm shall not, in and of itself, be sufficient to enable the development or production of circumvention devices. All cryptographic algorithms, cryptosystems, keys, and secrets shall be of sufficient strength and bit length to render breach or compromise of content beyond the capability of an ordinary user using commonly available tools, while meeting applicable export control laws. In the robustness rules, adopters must be prohibited from putting clear data on any user accessible bus or output.
4. **Rights:** An approved method must ensure that rights equal to (or no more permissive than) those delivered with the content be carried forward.
5. **Authentication:** The authentication method must ensure that the protected content is only accessible by another device (including software) if that device is compliant. This may be accomplished using *implicit* authentication such as use of encryption keys that are known only by compliant devices, or using *explicit* authentication such as confirming the target device's ability to protect the encrypted content consistent with these functional criteria prior to transmitting the content. The content protection method must securely manage the communication and distribution of any cryptographic keys or methods necessary for decrypting the encrypted content, using specific means to restrict such communication and redistribution.
6. **Revocation:** It shall be technologically possible to revoke the ability of an individual device to receive protected content if the device has been compromised. This should include those circumstances where the device is masquerading as a device that has NOT been compromised. The revocation process shall be governed by appropriate rules, procedures, and safeguards.