THE ADDRESSABLE SYSTEM CONTROL CHANNEL:
WILL IT BECOME YOUR SYSTEM'S WEAKEST POINT?

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ABSTRACT

This paper will examine the communications channel of an addressable cable system from several standpoints, and bring into focus issues of critical importance as dependence on the "addressability" nature of modern systems becomes more central to their utility. Contemporary marketing trends indicate the future use of addressable boxes will involve extensive use of programmable or downloadable functions (tiering, tagging, addressable box features) in order to enable/disable box functions, facilitate pay per view, or other novel methods of generating revenue.

The following topics will be examined:

1. In-band versus out of band addressing architectures - Arguments can be made toward either technique. The advantages/disadvantages of each will be discussed.

2. Protocol - Control channel instruction sets will be examined with respect to requirements for versatility, growth, efficiency, and ability to tackle current and future needs.

3. Data Rate - Throughout issues relative to requirements for box installation, pay per view, decoder instruction processing speeds and head end computer architecture will be highlighted.

4. Error Control - This involves understanding why the robustness of system data channels to channel impairments is important.

5. Security - An often overlooked fact is that the data channels of addressable boxes is a doorway to service theft.

While the motivations for addressability originally focused on dealing with churn and late (or non) pays, current developments go beyond that. Examination of the relevant control channel issues will ensure that future system requirements aren't sacrificed by addressing limitations.