

David Sarnoff Research Center
Subsidiary of SRI International

To Bill Beyers
Joe Donahue
Jim MacDonald
Steve Morrall

From Glenn Reitmeier

Date 8/25/91

Subject ADTV Mid-Course Corrections

Thank you for your interest in my report on ADTV program status and the need to make mid-course corrections. It was clear from our discussion that we all agree that meeting our ATTC testing date with the best possible system is the overwhelmingly important priority within the ADTV program. As a follow-up to our discussion, Bill Beyers and I met on Friday night to discuss how to best achieve that goal. We rapidly agreed on several major principles:

1. We need to assign additional people to hardware tasks that are behind schedule
2. We underestimated the cost of parts, and need to correct our estimate
3. We will certainly have to reallocate resources to reflect the needed corrections

In addition to regaining our schedule, there are also additional items that we agree are important, but which result in new or additional work:

1. ADTV should have a double conversion tuner for the ATTC tests
2. The ADTV modem should have 32-QAM capability
3. Trellis coding capability for the ADTV modem is highly desirable, but may not be achievable by March under any circumstances
4. Sarnoff should support TCE efforts with Hughes/Skycable

During a later session with Terry Smith, we all agreed that the following increases in hardware effort should be made:

1. Pre- and Post-Processors
This effort requires 1 additional MTS (Norm Hurst?), 1 additional AMTS, 1 CAD person and 1 technician.
2. Priority Processor
This effort requires Jonathan Schepps on a full-time basis and 1/2 of an additional board-simulation engineer.

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3. Transport Processor
This effort requires 1 additional board-simulation engineer [already identified and starting today].
4. Rate Buffer
This effort requires 1/2 of an additional board-simulation engineer.
5. Inverse Transport Processor
This effort requires Bruce Anderson on a full-time basis (he must be replaced on the ghost-cancellation project), 1 MTS to program PLDs (Beltz?), and 1 additional board-simulation engineer [already identified and starting today].
6. Subsystem Integration and Test
This effort requires the addition of Howard Edinger [already done] and Bob Siracusa, as well as 1 MTS to "captain" the other board simulators.
7. RF Modem
Providing 32-QAM capability requires full-time effort from the existing team through March.
8. Trellis Coding
Providing Trellis capability (if it can be done) will require the current FEC team to pick up this task, as soon as the Reed-Solomon effort is completed and continuing through March.
9. RF/IF Tasks
Integrating a Double-Conversion Tuner requires some additional effort from Klensch, Kelly and Stetz.

Accommodating these increases in hardware effort will surely require re-allocating resources. I have already initiated a task-by-task analysis of what will be required, given the needed increases and the effort already expended. Bill Beyers and I have had some initial discussion of the priorities of non-hardware tasks in ADTV, and we will develop our recommendations for changes as soon as we understand the magnitude of the additional hardware effort that is needed. Due to our time-critical schedule, I believe that we must increase our hardware efforts as soon as possible, and follow rapidly with consequent reductions in other tasks.

There are several issues to begin working on immediately:

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1. Can Norm Hurst be made available (or an equivalent identified)?
(Terry Smith to identify the potential impact)
2. Can Paul Knutson (or an equivalent from Indy) replace Bruce Anderson
on the de-ghosting project? (Bill Beyers to investigate)

G. A. Reitmeier

/jtm