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November 23, 1994

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

William F. Caton, Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

RE: ET Docket No. 93-7, Ex Parte Presentation

Dear Mr. Caton: DOCKET FILE COPY ORIGINAL

On Wednesday, November 23, 1994, representatives of General Instrument Corporation (GIC) made an ex parte to Richard Smith, Bruce Franca and Allan Stillwell of the Office of Engineering and Technology regarding unresolved issues in the above-referenced proceeding. GIC was represented by Quincy Rodgers, Walter Ciciora and Jeffrey Krauss.

The purpose of the meeting was to demonstrate the technical feasibility of "IR passthrough" (whereby IR codes intended for the cable decoder module are passed through the TV set transparently). In addition to the demonstration, the attached viewgraph presentation and the attached description of the passthrough circuitry were reviewed.

Sincerely,


Quincy Rodgers

Enclosures

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The Cable Consumer Interface and The "IR Pass Through

Presentation

By General Instrument Corporation

The Message

- The EIA “Command Set” is inadequate - it will burden consumers
- Without The “IR Pass Through”, the consumer is disadvantaged
- Participation by “other affected industries” (§42) requires it
- “IR Pass Through” is practical & cheap
- **Only needed on “cable ready”**
- Objections we’ve heard are not valid

Overview

- Why Do We Need It?
- Why Is It Practical?
- Answering the “Yes But’s”
- Conclusion

Why Do We Need The IR Pass Through?

- The EIA “Command Set” is inadequate
- Did not anticipated important needs
 - » Is adequate for “Interactive” and “MultiMedia” services
- Can’t accommodate the needs of other video providers
- Can’t accommodate the needs of “feature box” makers
- No input from other video providers or “feature box” makers

Why Do We Need The IR Pass Through? - cont....

- The Goal of the Decoder Interface:
- **Improve Compatibility for consumers**
 - » Consumer should be better off with “cable ready” products
 - » And have access to *all* cable services
 - » Don't preclude functions found in set-tops!
 - Access should be as easy as with a set-top;
 - » Consumer shouldn't have to learn new access procedures

Why Do We Need The IR Pass Through? - cont....

- EIA Command set lacks many Consumer needs:
 - » 1) Mode command control
 - To easily switch between video providers
 - Such as: cable, DBS, MMDS, LMDS, etc.
 - » 2) Display recall
 - To get back the program identification and details
 - » 3) Guide access
 - To easily find the way through “500 channels”

Why Do We Need The IR Pass Through? - cont....

- EIA set lacks many Consumer needs - cont.....:
- Menu Convenience Controls
 - » 4) Page up 6) Page left
 - » 5) Page down 7) Page right

Why Do We Need The IR Pass Through? - cont....

- EIA set lacks many Consumer needs - cont....
- For Digital Cable, DBS, MMDS, and LMDS:
 - » 8) Favorite channel
 - » 9) Parental control
 - » 10) Channel swap
- Audio controls
 - 11) Alternate audio, different languages

Why Do We Need The IR Pass Through? - cont....

- EIA set lacks many Consumer needs - cont....
 - » Virtual VCR & VCR controller
 - 12) Stop
 - 13) Pause
 - 14) Fast forward
 - 15) Reverse
 - 16) Play
 - 17) Record

Why Do We Need The IR Pass Through? - cont....

- EIA set lacks Consumer needs - cont....

- » 18) * 19) #

- Currently used in some cable services
- Consumers are familiar with these delimiters

- » Menu Navigation Controls

- 20) Previous menu 21) Return to Main Menu

- » Audio controls For Digital Audio Services

- 22) Mute 25) Left - right balance
- 23) Volume up 26) Front - back balance
- 24) Volume down

Why Do We Need The IR Pass Through? - cont....

- EIA set lacks Consumer needs - cont....
 - » 25) thru 54++) One finger “qwerty” keyboard
 - » Credit card reader
 - » Proportional pointing device (mouse)
 - To be used in General Instrument set-tops
 - Needed for Interactive and MultiMedia services
- “Cable Ready” shouldn’t be second rate!

Why Do We Need The IR Pass Through? - cont....

- Consumer side of the Decoder Interface Committee *refuses* to consider **Consumer to system communications**
 - » Only addressed Consumer Electronics Product to Module communications
 - » Can't complete design of module products!
 - » Can't create operation manual for modules!
 - » Can't answer subscriber questions!

Why Do We Need The IR Pass Through? - cont....

- We can't speak for other video providers
 - » DBS, Telco, MMDS, Cellular TV
- We can't speak for "feature module" makers
 - » Electronic Program Guides, PIP, Games
 - » Interactive Television adapters
 - » MultiMedia adapters

Why Is It Practical?

- GI makes millions of IR controls
- GI knows the technology & economics!:
 - » Three resistors @ 0.5 ¢ = 1.5¢
 - » One transistor @ 2¢
 - » Opto-Isolator @ 20¢
 - » Total Cost = less than 25¢
- Will use pins on Decoder Interface
 - » Want more than the twenty
 - » Use next higher connector family member

Why Is It Practical? - cont....

- Demonstration of Inexpensive TV with IR Pass Through added
- Wired connection to “set-back” module simulation
- Uses inexpensive (\$10 to \$20) Universal Remote Control
 - » Could be provided with TV
 - » Purchased at retail
 - » Purchased or rented from cable operator

Answering the “Yes But’s”

- It's not needed
- It will be expensive
- It doesn't fit our design approach
- It will confuse the TV's micro
- Maybe we won't use IR
- It's a Cable ruse to rent remote controls

Answering the “Yes But’s” - cont....

- *“Yes but, It’s not needed”*
- Yes it is!
 - » Decoder Interface is arbitrarily crippled without it
 - » Consumer is disadvantaged
 - » Other video providers would be hindered
 - » Feature box makers would be obstructed

Answering the “Yes But’s” - cont....

- *“Yes but, It will be expensive”*
 - » Parts costs are way less than a dollar
- *“Yes but It doesn’t fit our design approach”*
 - » It’s only needed on “Cable Ready” Product
 - » Plenty of time to adjust design
- Cripples Parental Control, Favorite Channel, and Channel Swap

Answering the “Yes But’s” - cont....

- **Important Point: It’s only needed on “Cable Ready” Products**
- There is no deadline, when it’s ready it can be produced
- There’s no requirement to make **any** “cable ready” product; this is voluntary!

Answering the “Yes But’s” - cont....

- *“Yes but, It will confuse the TV’s micro”*
 - » Set-top uses **same** IR codes as would set-back module
 - » Codes illuminate both set-top and TV/ VCR
 - » With set-top, same signals come through IR path
 - » TV or VCR must deal with them in either case!
 - » This is not a new burden!

Answering the “Yes But’s” - cont....

- *“Yes but, Maybe consumer electronics products won’t use IR”*
 - » Then cable **really needs an IR Path** to the module -- adds less than a dollar!
 - » Need to communicate with the system
 - » Subscriber needs familiar way to control
 - » Need to be able to write manuals, advise consumers

Answering the “Yes But’s” - cont....

- *“Maybe consumer electronics won’t use IR”*
- **Isn’t it ironic that the Consumer Electronics side might not use IR, but they ask that Cable be frozen in its use of IR?**

Answering the “Yes But’s” - cont....

- *“Yes but It’s a Cable ruse to rent remote controls”*
 - » New services need new remotes!
 - » New controls, new inputs
 - » **Look and Feel is critical**
 - » Renting remotes is financially unattractive!
 - » Very aggressive market for “Universal Remote” sales
 - » Very inexpensive! \$10 and up

Answering the “Yes But’s” - cont...

- *“Yes but cable can use a separate IR receiver”*
 - » So called “Kilroy” module
 - » Difficult to install, keep from falling off
 - » Double stick tape damages finishes
 - » Easily damaged, results in service calls
 - » Remote control aiming issues
 - » Creates incentive to keep Cable Box a set-top