

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

**TIVO INC.,**

**Plaintiff,**

**v.**

**EHOSTAR COMMUNICATIONS  
CORP., et al.**

**Defendants.**

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**2:04-CV-1-DF**

**CLAIM CONSTRUCTION ORDER**

Before the Court are EchoStar's Opening Claim Construction Brief (Dkt. No. 79), filed April 11, 2005, TiVo Inc.'s Opening Brief on Claim Construction (Dkt. No. 80), filed April 11, 2005, TiVo Inc.'s Opposition Brief on Claim Construction (Dkt. No. 97), filed May 12, 2005, and EchoStar's Response to TiVo's Opening Brief on Claim Construction (Dkt. No. 98), filed May 12, 2005. The Court conducted a claim construction hearing on May 23, 2005. The Parties provided the Court with copies of their slide presentations from the hearing and a Joint Claim Construction Chart (Dkt. No. 120), filed June 7, 2005. The Court now issues this Order to resolve the Parties' claim construction disputes.

**I.  
FACTUAL AND PROCEDURAL BACKGROUND**

Plaintiff TiVo, Inc. (hereafter “TiVo”) filed suit against defendants on January 5, 2004, for alleged infringement of U.S. Patent No. 6,233,389 (the “’389 patent”). Defendants (collectively referred to as “EchoStar”) are a group of inter-related companies who together operate or support a satellite television service called the Dish Network in combination with digital video recorders (“DVRs”). TiVo alleges that EchoStar, by making, using, offering to sell, and/or selling digital video recording devices, digital video recording device software, and/or personal television services in the United States, is infringing, has infringed, and/or has contributed to and induced infringement of one or more claims of the ’389 patent. In addition, TiVo alleges that such infringement has been willful and deliberate. *See* Amended Complaint for Patent Infringement (Dkt. No. 3), at ¶¶ 11-12 (filed Jan. 15, 2004).

The ’389 patent, entitled “MULTIMEDIA TIME WARPING SYSTEM,” describes a digital video recorder system that digitally records television signals from analog and digital sources such as cable and satellite television providers. In their briefing and during the claim construction hearing, the parties focused their presentations on claims 1, 31, 32, and 61 of the ’389 patent. Claims 1 and 31 are process claims, and claims 32 and 61 are the apparatus claims that respectively correspond to claims 1 and 31. Accordingly, the parties request the Court to construe terms that appear in these claims. The text of each of the claims at issue is set forth below:

1. A process for the simultaneous storage and play back of multimedia data, comprising the steps of:

accepting television (TV) broadcast signals, wherein said TV signals are based on a multitude of standards, including, but not limited to, National

Television Standards Committee (NTSC) broadcast, PAL broadcast, satellite transmission, DSS, DBS, or ATSC;

tuning said TV signals to a specific program;

providing at least one Input Section, wherein said Input Section converts said specific program to an Moving Pictures Experts Group (MPEG) formatted stream for internal transfer and manipulation;

providing a Media Switch, wherein said Media Switch parses said MPEG stream, said MPEG stream is separated into its video and audio components;

storing said video and audio components on a storage device;

providing at least one Output Section, wherein said Output Section extracts said video and audio components from said storage device;

wherein said Output Section assembles said video and audio components into an MPEG stream;

wherein said Output Section sends said MPEG stream to a decoder;

wherein said decoder converts said MPEG stream into TV output signals;

wherein said decoder delivers said TV output signals to a TV receiver; and

accepting control commands from a user, wherein said control commands are sent through the system and affect the flow of said MPEG stream.

31. A process for the simultaneous storage and play back of multimedia data, comprising the steps of:

providing a physical data source, wherein said physical data source accepts broadcast data from an input device, parses video and audio data from said broadcast data, and temporarily stores said video and audio data;

providing a source object, wherein said source object extracts video and audio data from said physical data source;

providing a transform object, wherein said transform object stores and retrieves data streams onto a storage device;

wherein said source object obtains a buffer from said transform object, said source object converts video data into data streams and fills said buffer with said streams;

wherein said source object is automatically flow controlled by said transform object;

providing a sink object, wherein said sink object obtains data stream buffers from said transform object and outputs said streams to a video and audio decoder;

wherein said decoder converts said streams into display signals and sends said signals to a display;

wherein said sink object is automatically flow controlled by said transform object;

providing a control object, wherein said control object receives commands from a user, said commands control the flow of the broadcast data through the system; and

wherein said control object sends flow command events to said source, transform, and sink objects.

32. An apparatus for the simultaneous storage and play back of multimedia data, comprising:

a module for accepting television (TV) broadcast signals, wherein said TV signals are based on a multitude of standards, including, but not limited to, National Television Standards Committee (NTSC) broadcast, PAL broadcast, satellite transmission, DSS, DBS, or ATSC;

a module for tuning said TV signals to a specific program;

at least one Input Section, wherein said Input Section converts said specific program to an Moving Pictures Experts Group (MPEG) formatted stream for internal transfer and manipulation;

a Media Switch, wherein said Media Switch parses said MPEG stream, said MPEG stream is separated into its video and audio components;

a module for storing said video and audio components on a storage device;

at least one Output Section, wherein said Output Section extracts said video and audio components from said storage device;

wherein said Output Section assembles said video and audio components into an MPEG stream;

wherein said Output Section sends said MPEG stream to a decoder;

wherein said decoder converts said MPEG stream into TV output signals;

wherein said decoder delivers said TV output signals to a TV receiver; and

accepting control commands from a user, wherein said control commands are sent through the system and affect the flow of said MPEG stream.

61. An apparatus for the simultaneous storage and play back of multimedia data, comprising:

a physical data source, wherein said physical data source accepts broadcast data from an input device, parses video and audio data from said broadcast data, and temporarily stores said video and audio data;

a source object, wherein said source object extracts video and audio data from said physical data source;

a transform object, wherein said transform object stores and retrieves data streams onto a storage device;

wherein said source object obtains a buffer from said transform object, said source object converts video data into data streams and fills said buffer with said streams;

wherein said source object is automatically flow controlled by said transform object;

a sink object, wherein said sink object obtains data stream buffers from said transform object and outputs said streams to a video and audio decoder;

wherein said decoder converts said streams into display signals and sends said signals to a display;

wherein said sink object is automatically flow controlled by said transform object;

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