

**Keywords: claim construction; grammatical construction; means-plus-function**

**General: Claims are construed on review without deference to lower court interpretation, but the appeals court may consider interpretations of court other than the lower court that decided the appealed decision. Strict grammatical construction may be used in patent disputes, but ultimately the question is what one skilled in the art would have understood. A means-plus-function element corresponding to a programmed computer must be described in terms of the algorithm implemented.**

*Finisar v. DirecTV*

No. 2007-1023, -1024 (Fed. Cir. Apr. 18, 2008)

**I. Facts**

Finisar owns U.S. Patent No. 5,404,505 (the '505 patent), relating to systems and methods for scheduling transmissions of a database in tiers based upon demand or at specific times and rates of repetition. More popular programs (e.g., movies, etc.) are scheduled at announced, regular intervals, while less popular programs may be requested or scheduled at less frequent intervals. Most interaction, then, is unidirectional, with subscribers not making requests for the more popular programs. This differently scheduled programming is accomplished by dividing the programming database into tiers by popularity, and transmitting the tiers according to their own schedules.

DirecTV offers subscriber television broadcasts including 4 types of information: turnaround programming (scheduled by another party, such as CNN or ESPN, and simply rebroadcast by DirecTV); playback programming (such as "pay-per-view" movies); conditional access information (permitted to authorized subscribers and transmitted in encrypted format); and program guide information.

Finisar was aware of activity by DirecTV dating to the late 1990's, but finally put DirecTV on notice of infringement in late 2003. Finisar eventually sued. The claims were interpreted in a Markman hearing, some claims were invalidated by summary judgment, and a jury eventually found that DirecTV infringed directly and indirectly, and awarded nearly \$80 million in damages and \$25 million in enhanced damages for willful infringement. The court also denied JMOL motions by DirecTV, and imposed a compulsory license for future activities by DirecTV.

Particularly at issue was the interpretation of certain claim terms, including "information database" and "downloading into a memory storage device". These appear in independent claim 16:

16. An information transmission method comprising the steps of:

storing an information database on one or more memory devices;

generating and storing on said memory devices a hierarchically arranged set of indices for referencing data in said information database, including distinct indices for referencing distinct portions thereof, and embedding said indices in said information database;

scheduling transmission of selected portions of said information database, including assigning each selected portion of said information database one or

more scheduled transmission times;

transmitting a stream of data packets containing said selected portions of said information database in accordance with said scheduled transmission times;

said scheduling step including dividing said selected portions of said information database into a prioritized set of tiers, wherein all the selected portions of said information database in each tier are transmitted at a corresponding repetition rate, wherein the repetition rate for higher priority tiers is higher than the repetition rate for lower priority tiers;

receiving said transmitted stream of data packets at subscriber stations;

at each subscriber stations, storing filter data corresponding to a subset of said indices, said filter data specifying a set of requested data packets which comprises a subset of said transmitted data packets; and

at each subscriber station, downloading into a memory storage device those of said received data packets which match said specified set of requested data packets.

These terms were interpreted in the Markman hearing in relatively broad ways, leading to the finding of infringement (but apparently avoiding invalidity). It is worth noting that the terms had also been interpreted by a different court in another dispute involving the '505 patent (although not apparently involving DirecTV).

DirecTV appealed a number of aspects of the decision, and Finisar cross-appealed the invalidity determinations and the denial of an injunction in favor of the compulsory license.

## II. Issues

- A. How should the appeals court consider the interpretation of claim terms by the lower court(s) and was the interpretation in this case in error?
- B. What rules should apply to grammatical interpretation in patent disputes—in this case relating to interpretation of a prior art document?
- C. What disclosure should support a means-plus-function element implemented by a programmed computer?

## III. Discussion

- A. The court here began by observing that for claim interpretation (an issue of law), the appeals court gives no deference to lower court interpretations. The court also repeated well-known rules of ordinary meaning and reference to intrinsic evidence, particularly “the context of the entire patent, including the specification,” and the fact that extrinsic evidence cannot overcome persuasive intrinsic evidence.

That said, however, regarding the terms “information database” and “downloading into a memory storage device”, the court quickly noted and was apparently influenced by a different ruling involving the '505 patent (from a different district court) in which the interpretation of

those terms was more limited than the lower court gave in this case. The court then proceeded to discuss both lower court interpretations, and to analyze the manner in which the '505 patent itself presented the workings of the claimed system and method. The ultimate interpretation adopted by the court was *not* that of either lower court, but was substantially more restrictive.

The court seems almost to have stretched the limits of other rules precluding the reading of limitations from the specification into the claims. For the claimed "information database," for example, the court adopted the interpretation "a collection of computerized information which can be accessed and searched, and from which selected information can be retrieved, and where the search and retrieval capabilities are at least as specific as those of the hierarchically arranged set of indices." Similarly the court interpreted the "downloading" term to require transfer (which the lower court also required) as well as retention of the data for later viewing (apparently excluding reading on buffers, ring buffers or other "transient" storage).

The patentee here seemed almost disadvantaged by having provided analogies to libraries in an effort to make the description of the invention more accessible. It would also seem that on this point the level of detail in the description served as a well from which the court drew for imposing a more limiting interpretation.

Interestingly, after that detailed work, the court found that the lower court's interpretation of the "information database" term was harmless error. However, to the extent that the "downloading" term could affect the outcome, the case was remanded on this issue.

- B. The issue of grammatical interpretation arose in connection with a prior art reference presented as a basis for an anticipation challenge. The reference provided:

"A few hundred pages of general interest can be repeated in a short cycle, whereas less important or less frequently updated pages are inserted in hourly or even daily intervals into specific slots in the cycle, or according to a predetermined schedule."

The issue was really whether the jury could have interpreted the passage as implying that both tiers could be broadcast at scheduled times (or just one of them). The issue of anticipation could at least partially turn on this question.

The court proceeded through a complex analysis of the art, as well as rules of grammar and punctuation, including "the doctrine of the last antecedent," focusing on the comma before the last phrase of the passage. The court also analyzed these rules to those of statutory interpretation. Ultimately, however the court reached the conclusion that in a patent dispute, the question should be one of what one skilled in the art would understand. The court remanded the case on this issue because the denial of DirecTV's JMOL motion was based upon an erroneous interpretation of the reference.

- C. As a subsidiary, but important issue, the court considered a means-plus-function element of the claims that was apparently to be implemented via a programmed computer. The court noted that the specification provided no formula, flow chart or other detailed description of an algorithm other than simply repeating the function. Referring to earlier decisions, including the 2008 case of *Aristocrat Techs Austl. Pty v. Int'l Game Tech.*, the court found that this is not enough and affirmed the lower court's indefiniteness ruling as to the claims involved.

#### **IV. Conclusion**

Issues of claim interpretation are still considered *de novo* by the appeals court, and apparently many factors may be considered, particularly the specification and other court rulings. It could be that “less is more” may be a useful approach in some cases for detailed explanations of the invention.

For means-plus-function elements implemented as or by a computer, it now seems IMPERATIVE to provide some sort of formula or flow chart to support the claim.

Other issues:

1. Compulsory license—this case involved yet another compulsory license in lieu of an injunction. While the court vacated it due to other errors, it did not seem to have a problem with the concept itself. This appears to be a growing trend.
2. Graham factors—the court had a short and not very important discussion of obviousness. Interestingly, it cited the Graham factors, as usual, but not KSR (perhaps that was not necessary). This may point to a need to emphasize the Graham factors more regularly, including in office action responses filed in the PTO.
3. Willfulness—the court responded to a charge by Finisar that DirecTV had received a non-infringement opinion but did not consider invalidity. The court rejected that argument—opinions can clearly offer a reasonable basis for continuing activity based on non-infringement or invalidity defenses, or both. Interestingly, the court also noted that the *Seagate* case did not even impose an affirmative obligation to obtain opinion of counsel (although it is likely a good idea—this court determined that Finisar had not proven that DirecTV willfully infringed, and was probably influenced by the opinion of counsel).

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