

Patent References and the Like

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{Company's} Mr. {Person's} Prior Art References

#1.

U.S Patent 4,660,157 (Beckwith, et al., Real Time Video Perspective Digital Map Display Method). Cited in the '073 Patent and distinguished as follows:

"The '157 Patent stores the map as a collection of terrain points with associated altitudes; the large amount of storage required by this approach requires that a tape be prepared for each mission. The present invention stores terrain data as a collection of polygons which results in a significant reduction of data base storage; larger geographic areas can be stored so that it is not necessary to generate a data base for each mission." See '073 Patent, Column 2, Lines 33-40.

"The '157 Patent accounts for the aircraft's heading by controlling the way the data is read out from the tape. Different heading angles result in the data being read from a different sequence of addresses. Since addresses exist only at discrete locations, the truncation of address locations causes an unavoidable change in the map shapes as the aircraft changes heading. The present invention stores terrain as polygons which are mathematically rotated as the aircraft changes attitude." See '073 Patent, Column 2, Lines 47-55.

This Patent was considered by the Examiner and does not need any further explanation. Nonetheless, I will provide it.

One of the embodiments of '073 uses data compression. I did that to make sure the disclosure was enabled. At the time the '073 invention was made the typical hard drive was 4.3 Gbytes and CDs hold 650 Mbytes. DVDs had not yet been invented. Database compression made it unnecessary to generate a database for each mission. The second paragraph says '073 uses real 3D, not the fake 3D that Beckwith uses. It does not say it is limited to compressed databases.

That is why the claims directed to database compression are all dependent claims. Their respective independent claims do not require database compression. From United States Court of Appeals for the Federal Circuit; 03-1269, -1286; *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 U.S.P.Q.2d 1321 (Fed. Cir. 2005):

Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term. *Vitronics*, 90 F.3d at 1582. Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims. See *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001); *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1159 (Fed. Cir. 1997). Differences among claims can also be a useful guide in understanding the meaning of particular claim terms. See *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1538 (Fed. Cir. 1991). For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim. See *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004).

{Emphasis added}

#2.

U.S. Patent 5,179,638 (Dawson et al., Method and Apparatus for Generating a Texture Mapped Perspective View). Cited in the '073 Patent and distinguished as follows:

"The '638 Patent stores the map as a collection of terrain points with associated altitudes; thereby requiring a large amount of data storage. The terrain points are transformed into polygons during program run-time thereby adding to the processing burden. The present invention stores terrain data as a collection of polygons which results in a significant reduction of data base storage." See '073 Patent, Column 3, Lines 45-52.

Again, this Patent was considered by the Examiner and does not need any further explanation. Nonetheless, again, I will provide it.

Again, one of the embodiments of '073 uses data compression. That is why the claims directed to database compression are all dependent claims. Their respective independent claims do not require database compression. As per the Court's statement in *Phillips v. AWH Corp*, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.

#3.**Claimed Inventive Contribution in '073 Patent (Use of a "Polygon Database"):**

1. "A digital data base comprising terrain data, said terrain data representing real terrestrial terrain as at least one polygon, said terrain data generated from elevation data of said real terrestrial terrain." '073 Patent, Element in Independent Claims 1, 12 and 23:

It does not say the polygon database is compressed.

#4.**Claimed Inventive Contribution in '073 Patent (Use of a "Polygon Database"):**

2. "Providing a data base comprising terrain data, said terrain data representing real terrestrial terrain as at least one polygon, said terrain data generated from elevation data of said real terrestrial terrain." '073 Patent, Element in Independent Claim 29

It does not say the database is compressed.

#5.**Claimed Inventive Contribution in '073 Patent (Use of a "Polygon Database")**

3. "The digital data base represents the terrain and manmade structures as collections of polygons in order to minimize storage requirements." '073 Patent, Column 5, Lines 6-8.

That is one of the embodiments in the disclosure.

#6.

Claimed Inventive Contribution in '073 Patent (Use of a "Polygon Database"):

4. "CD-ROM Data Base 105 contains the digital data base consisting of three-dimensional polygon data for terrain and manmade structures." '073 Patent, Column 6, Lines 14-17.

a. It does not say the database is compressed.

b. The CD-ROM is for enablement. The claims where the digital data base comprises a cd rom disc and cd rom drive are dependent claims.

#7.

Claimed Inventive Contribution in '073 Patent (Use of a "Polygon Database"):

5. "The data base is generated from several sources. The U.S. Geological Survey (USGS) makes available various databases, two of which are of particular interest. The first is the Digital Elevation Model data which consists of an array of regularly spaced terrain elevations. This data base is converted into a data base containing polygons (whose vertices are three-dimensional points) in order to maximize the geographic area covered by CD-ROM Data Base 105 and also to reduce the amount of run-time processing required of Computer 107." '073 Patent, Column 16, Lines 5-14. See also '073 Patent, Column 16, Lines 29-67 for extensive discussion of method for creating the polygon database in the preferred embodiment.

One of the embodiments uses compression.

#8.

Claimed Inventive Contribution in '073 Patent (Use of a "Polygon Database"):

{This starts with a quote from 5,904,724}

6. "The procedure for generating the synthesized three-dimensional view from the Digital Database may use any number of techniques, including those disclosed in the 1987 patent to Beckwith et al. (U.S. Pat. No. 4,660,157 REAL TIME VIDEO PERSPECTIVE DIGITAL MAP DISPLAY METHOD), the 1993 patent to Dawson et al. (U.S. Pat. No. 5,179,638 METHOD AND APPARATUS FOR GENERATING A TEXTURE MAPPED PERSPECTIVE VIEW). One disadvantage of generating the synthesized three-dimensional view from these elevation databases in real time is the amount of storage space they require. To avoid this large amount of data storage, one embodiment of Digital Database 107 is composed of terrain data that represents the real terrain using polygons. This database may be generated using any number of techniques. For example, this database may be generated by transforming one or more elevations databases into a polygon database using the

technique taught in "Pilot Aid Using a Synthetic Environment," Ser. No. 08/274,394 filed Jul. 11, 1994."

U.S. Patent 5,904,724 (Margolin, Method and Apparatus for Remotely Piloting an Aircraft), Column 10, Lines 27-44.

Mr. Person's comments:

Note that the "polygon" elements in the '073 Patent's claims are conspicuously absent from the '724 Patent's claims. This leads me to believe that there is file-wrapper history behind the "polygon" element in the '073 Patent.

The file wrappers for '073 and '724 have been publicly available on my web site since August 2008. Mr. {Person} was invited to look at it. I doubt that he did.

Mr. {Person} was (and no doubt still is) an idiot.

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