UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KOICHI TAKEUCHI

Appeal 2008-0280
Application 09/633,778[1]
Technology Center 2600

Decided: July 25, 2008

Before ROBERT E. NAPPI, MARC S. HOFF,
and KARL EASTHOM, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellant appeals under 35 U.S.C. § 134 from a Final Rejection of claims 1, 6-11, 14-16, 19, 20, and 25-43.[2] We have jurisdiction under 35 U.S.C. § 6(b).

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[1] Application filed August 7, 2000. The real party in interest is Mitsubishi Denki Kabushiki Kaisha.

We affirm-in-part.

Appellant's invention relates to a digital broadcast receiving system. Appellant's system includes an information table generator that generates a new first specific information table containing information only on the program to be recorded, and an information table substitution unit by which the new first specific information table is substituted for an information table corresponding to the first specific information table contained in the packet stream transmitted (Spec. 4).

Claim 1 is exemplary:

1. A digital broadcast receiving system comprising:

a receive and demodulation section by which a digital broadcast signal received from the exterior is demodulated and outputted as a packet stream;

a packet filter that filters a predetermined packet in a plurality of packets composing said packet stream;

a storing unit by which said packet stream passing through said packet filter is stored;

an information table generator that generates, with respect to a PAT (program association table) in various information tables contained in said packet stream, a new PAT containing information only on a program to be stored in said storing unit; and

an information table substitution unit by which said new PAT is substituted for an information table corresponding to said PAT contained in said packet stream transmitted, said information table substitution unit being disposed between said receive and demodulation section and said storing unit,

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[2] Claims 2-5, 12, 13, 17, 18, and 21-24 have been canceled.

wherein said packet filter filters, of a plurality of PMTs (program mapping tables) contained in said packet stream transmitted, an information table other than a PMT related to said program to be stored,

wherein,

said information table generator has a function with which a specific value is substituted for the PID value of a packet for transmitting an ES (Elementary Stream) described in said PMT, thereby to generate said PMT;

said information table substitution unit has a function with which said specific value is substituted for the PID value of a packet for transmitting an ES contained in said packet stream transmitted; and

said digital broadcast receiving system further comprising a recording section for retaining said specific value such that subsequent reproduction of said packet stream may be performed without first verifying the contents of the PMT and PAT.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Ohishi	US 5,909,257	Jun. 1, 1999
Blatter	US 6,016,348	Jan. 18, 2000
Freimann	US 6,604,243 B1	Aug. 5, 2003

Claims 1, 6, 8-11, 16, 20, 25, 27-30, 33, 35, 36, and 38-41 stand rejected under 35 U.S.C. § 103(a) as being obvious over Blatter in view of Ohishi.

Claims 7, 14, 15, 19, 26, 31, 32, 34, 37, 42, and 43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Blatter in view of Ohishi and Freimann.

Appellant contends, *inter alia*, that the applied references fail to disclose or suggest several elements of Appellant's claimed invention, and that motivation to combine the references is lacking.

Rather than repeat the arguments of Appellant or the Examiner, we make reference to the Brief (filed November 7, 2006), the Answer (mailed March 19, 2007), and the Reply Brief (filed May 14, 2007) for their respective details.

ISSUE

The principal issue in the appeal before us is whether the Examiner erred in holding that Blatter in combination with Ohishi teaches all the features of the claimed invention.

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

The Invention

1. According to Appellant, he has invented a digital broadcast receiving system that includes an information table generator that generates a new first specific information table containing information only on the program to be recorded, and an information table substitution unit by which the new first specific information table is substituted for an information table corresponding to the first specific information table contained in the packet stream transmitted (Spec. 4).

Blatter

2. Blatter teaches conditional access processing, decoding, and formatting of encrypted packet data for storage by a consumer receiver of broadcast, satellite, or cable video material (col. 1, ll. 7-11).

3. Blatter teaches storing program specific information (PSI) related (only) to the particular program to be stored (col. 8, ll. 8-17; col. 9, ll. 33-61).

4. Blatter does not receive the full PSI intact, but rather receives and buffers various tables until all the required tables are assembled (col. 8, ll. 38-61).

Ohishi

5. Ohishi teaches providing apparatus and method of receiving a broadcasted digital signal with program management using simple program specification subsidiary information (PSSI) (col. 2, ll. 42-45).

6. Ohishi Figs. 6C and 18 illustrate the analogous contents of a program mapping table (PMT) and PSSI, respectively, and both indicate that specific values are substituted for packet identifier (PID) values (see Ohishi, col. 11, ll. 29-43).

7. Ohishi teaches that PSI is a generic title for PAT and PMT (col. 11, ll. 30-31).

8. Ohishi discloses a system wherein the PAT is modified to reflect only programs selected for recording (col. 7, l. 48 – col. 8, l. 7; see Figs. 11B and 11E).

9. Ohishi Fig. 4 shows a program association table (PAT), having a 16 bit field for “program number.”

Freimann

10. Freimann teaches a fast matching algorithm using a memory space efficient data structure to accomplish filtering of information received by a set top box (col. 2, ll. 16-20).

PRINCIPLES OF LAW

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734, (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, (1966). *See also KSR*, 127 S.Ct. at 1734 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.")

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *id.* at 1739, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that "the principles laid down in *Graham* reaffirmed the 'functional approach' of *Hotchkiss*, 11 How. 248." *KSR*, 127 S. Ct. at 1739 (citing *Graham v. John*

Deere Co., 383 U.S. 1, 12 (1966) (emphasis added)), and reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* The Court explained:

> When a work is available in one form of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.*

ANALYSIS

Claims 1, 6, 8-10, 20, 25, 27-29, 35, 36, and 38-40

We select claim 1 as representative of this group, pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii).

Appellant argues that the combination of Blatter and Ohishi fails to teach an information table generator that substitutes a specific value for a packet identifier (PID) value to generate a Program Mapping Table (PMT) (App. Br. 11). Because Ohishi teaches generation of Program Specification Subsidiary Information (PSSI) rather than a PMT, Appellant argues, Ohishi does not supply the teaching missing from Blatter (App. Br. 11-12).

We are not persuaded by Appellant's argument, because as explained by the Examiner, the PMT for a program and the PSSI for a program include the same information and are used for the same purpose (Ans. 4). Ohishi Figs. 6C and 18 illustrate the analogous contents of a PMT and PSSI, respectively, and both indicate that specific values are substituted for packet identifier values (FF 6).

Appellant argues that Blatter fails to disclose or suggest an information table that generates, with respect to a program association table (PAT), a new PAT containing information only on a program to be recorded in the storing unit. We do not find this argument persuasive, because Blatter does teach storing program specific information (PSI) related (only) to the particular program to be stored (FF 3). Ohishi explains that PSI is a generic title for PAT and PMT (FF 7).

Appellant argues that Blatter fails to disclose or suggest that a new PAT is substituted for an information table corresponding to the PAT contained in the packet stream transmitted, because Blatter teaches modifying the conditional access table (CAT) rather than the PAT (App. Br. 13). We do not find this argument persuasive, because the Examiner relies on Ohishi, rather than Blatter, to teach this feature (Ans. 6). Ohishi teaches modifying the PAT to reflect only programs selected for recording (FF 8).

Appellant argues that the combination of Blatter and Ohishi fails to teach a recording section for retaining the specific values such that subsequent reproduction of the package stream may be performed without first verifying the contents of the PMT and Program Access Table (PAT) (App. Br. 14-15). We find this argument unpersuasive because we agree

with the Examiner that the claim language at issue ("*may* be performed") is permissive, rather than mandatory. Since neither Blatter nor Ohishi *require* any verification of the PMT or PAT in any fashion, the references fully meet this limitation.

Appellant argues that there is no motivation to combine Blatter and Ohishi, because the Examiner has not supplied the requisite evidence of teaching, suggestion, or motivation (App. Br. 17-18). We are not persuaded by Appellant's arguments. We have noted *supra* that Blatter in combination with Ohishi teach all the limitations recited in claim 1. Appellant's Specification does not provide evidence that Appellant's apparatus amounts to any more than the predictable use of prior art elements according to their established functions. *KSR*, 127 S. Ct. at 1740.

Because we find, contrary to Appellant's arguments, that Blatter in combination with Ohishi teaches all of the limitations of claim 1, we do not find error in the Examiner's rejection of claim 1, nor of claims 6, 8-10, 20, 25, 27-29, 35, 36, and 38-40 not separately argued, under 35 U.S.C. § 103(a).

Claims 11, 30, 33, and 41

We select claim 11 as representative of this group, pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii).

Appellant argues that Blatter and Ohishi fail to disclose or suggest a first recording section for recording a program information index generated based on information contained in various information tables extracted from the packet stream (App. Br. 13). Appellant's position is that the Examiner's reliance on the full PSI to teach this feature is misplaced, because the full

PSI is a table that is received intact (App. Br. 13); as a result, Blatter does not *generate* this PSI based on information in various information tables extracted from the packet stream (App. Br. 14). We are not persuaded by Appellant's argument, because Blatter does not receive the full PSI intact, but rather receives and buffers various tables until all the required tables are assembled (FF 4). We find that this assembly in Blatter meets the limitation of "generating" a program information index.

We are not persuaded by Appellant's argument that Blatter and Ohishi fail to teach that a specific value is substituted for the PID value of a packet, or that in the substituting step the specific value is substituted for the PID value of a packet (App. Br. 14). As we discussed *supra* with respect to claim 1, we find that Ohishi teaches these features.

We are also not persuaded by Appellant's argument that Blatter and Ohishi fail to teach generating a new PAT containing information only on a program to be recorded or substituting that new PAT for an existing one (App. Br. 14). As we discussed *supra* with respect to claim 1, we find that Blatter teaches these features.

Claims 16 and 19

With respect to claim 16, Appellant argues that the combination of Blatter and Ohishi fails to teach altering a program number of a program recorded in said record and reproduction unit (App. Br. 16).

According to the Examiner, Ohishi explicitly discloses altering a plurality of program numbers, as a plurality of different packet identifier (PID) values are altered to correspond to new default values (Ans. 8). We reject the Examiner's apparent attempt to construe the term "program

number" broadly enough to encompass packet identifier values, however, because Ohishi uses "PID values" to refer to one specific concept, and "program number" to refer to another specific concept. Ohishi Fig. 4 shows a program association table (PAT), having a 16 bit field for "program number" (FF 9). The section of Ohishi cited by the Examiner in support of his position alters only PID values, not program numbers, and we can find no support elsewhere in Ohishi for the concept of altering a program number of a program recorded in said record and reproduction unit.

We therefore find error in the Examiner's rejection of claim 16, as well as claim 19 dependent therefrom.

Claims 7, 14, 15, 26, 31, 32, 34, 37, 42, and 43

Appellant relies on the same arguments for patentability of these dependent claims that were made with regard to independent claim 1, further noting that Freimann does not remedy any of the noted deficiencies in the base combination of Blatter and Ohishi (App. Br. 20). However, we affirmed the rejection of claim 1 *supra*, finding no deficiencies in the Examiner's asserted combination. We therefore also affirm the rejection of claims 7, 14, 15, 26, 31, 32, 34, 37, 42, and 43, for the reasons expressed with regard to claim 1.

CONCLUSION OF LAW

We conclude that Appellant has not shown that the Examiner erred in rejecting claims 1, 6-11, 14, 15, 20, and 25-43. Claims 1, 6-11, 14, 15, 20, and 25-43 are not patentable.

We conclude the Appellant has shown that the Examiner erred in rejecting claims 16 and 19. On the record before us, claims 16 and 19 have not been shown to be unpatentable.

DECISION

The Examiner's rejection of claims 1, 6-11, 14, 15, 20, and 25-43 is affirmed. The Examiner's rejection of claims 16 and 19 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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BIRCH, STEWART, KOLASCH & BIRCH
P. O. BOX 747
FALLS CHURCH, VA 22040-0747