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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RONALD P. DOYLE and DAVID L. KAMINSKY

Appeal 2014-009494
Application 12/828,281
Technology Center 2100

Before DEBRA K. STEPHENS, JASON V. MORGAN, and DAVID J. CUTITTA II, *Administrative Patent Judges*.

STEPHENS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a Non-Final Rejection of claims 5–11.[1] We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] Claims 1–4 have been cancelled.

STATEMENT OF THE INVENTION

According to Appellants, the claims are directed to a holistic task scheduling for distributed computing (Abstract). Claim 5, reproduced below, is representative of the claimed subject matter:

> 5. A task scheduling data processing system comprising:
>
> a computer with at least one processor and memory and coupled to a distributed computing system of different nodes over a computer communications network;
>
> a parallel processing module configured to perform parallel processing of a provided problem in the different nodes; and,
>
> a task scheduler executing in the computer, the task scheduler comprising program code that when executed in the memory of the computer is enabled to select first and second tasks associated with respectively different first and second jobs scheduled for processing within a node of the distributed computing system by the task scheduler, to compare an estimated time to complete the first and second jobs, and to schedule the first task for processing in the node when the estimated time to complete the second job exceeds the estimated time to complete the first job, but otherwise scheduling the second task for processing in the node when the estimated time to complete the first job exceeds the estimated time to complete the second job.

REFERENCES

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

Borkenhagen	US 6,212,544 B1	Apr. 3, 2001
Doyle	US 8,595,735 B2	Nov. 26, 2013
Zhou	US 2006/0265712 A1	Nov. 23, 2006

Maleeha Kiran, et al., *Execution Time Prediction of Imperative Paradigm Tasks for Grid Scheduling Optimization,* International Journal of Computer Science and Network Security Vol. 9, No. 2, 155 (Feb 2009) ("Kiran")

REJECTIONS[2]

Claims 8–11 stand rejected under 35 U.S.C. §101 as being directed to non–statutory subject matter (Non–Final Act. 2).

Claims 5–10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zhou, Kiran, and Appellants' Admitted Prior Art (AAPA) (Final Act. 7–11).

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zhou, Kiran, APA, and Borkenhagen (Final Act. 11–12).

We have only considered those arguments that Appellants actually raised in the Briefs. Arguments Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2012).

[2] The non-statutory obviousness-type double patenting of claims 5 and 8 has been withdrawn (Ans. 2).

ISSUES

35 U.S.C. § 101: Claims 8–11

Appellants argue their invention, as recited in claims 8–11, is directed to statutory subject matter (App. Br. 4–9). The issue presented by the arguments is

Issue 1: Has the Examiner erred in concluding the invention, as recited in claim 8, is directed to non-statutory subject matter?

ANALYSIS

Appellants argue, according to their Specification, a computer readable medium may be a computer readable signal medium or a computer readable storage medium (App. Br. 5; Spec. ¶ 24). Thus, Appellants argue, because a storage medium is distinguished from a signal medium, their Specification expressly excludes a carrier wave from a storage medium (App. Br. 6; Spec. ¶¶ 24–25).

We are not persuaded by Appellants' arguments. Appellants' Specification states "[a] computer readable storage medium *may be, for example, but not limited to,* an electronic, . . ." (Spec. ¶ 24) (emphasis added). Thus, Appellants have not explicitly defined a computer readable storage medium, but instead, have described the term in an open-ended manner. Appellants' further citation to paragraph 25 is also not persuasive. Again, Appellants have not explicitly defined the term, but instead, provided open-ended examples. Specifically, this paragraph recites "[a] computer readable signal medium *may include* a propagated data signal . . . (Spec. ¶ 25) (emphasis added). The paragraph continues that "[a] computer

readable signal medium *may be* any computer readable medium that is not a computer readable storage medium (*id.*). Thus, with the undefined boundaries of the two terms, we are unpersuaded the Examiner's interpretation is not broad, but reasonable, in light of the Specification. It follows, we are not persuaded the Specification precludes the computer readable storage medium from including a transitory signal.

Furthermore, as noted by the Examiner, several examples of computer readable storage media provided by the Specification are signal media such as "infrared" (Ans. 9; *see also* Spec. ¶ 24). Appellants do not persuasively rebut the Examiner's finding that these are directed to signals, rather than non-transitory storage (Ans. 9). However, these examples blur the purported distinction between storage and signal. Thus, an artisan of ordinary skill would not understand the Specification as making a clear distinction between computer readable storage and computer readable signal media.

Appellants are not precluded from amending these claims to overcome this rejection. Guidance on this point is provided in U.S. Patent & Trademark Office, Subject Matter Eligibility of Computer Readable Media, 1351 Off. Gaz. Pat. Office 212 (Feb. 23, 2010) ("A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation 'non-transitory' to the claim."). *See also* U.S. Patent & Trademark Office, Evaluating Subject Matter Eligibility Under 35 USC § 101 (August 2012 Update) (pp. 11–14), available at http://www.uspto.gov/patents/law/exam/101_training_aug2012.pdf (noting that while the recitation "non-transitory" is a viable option for overcoming the presumption that

those media encompass signals or carrier waves, merely indicating that such media are "physical" or tangible" will not overcome such presumption).

Accordingly, we are not persuaded the invention, as recited in claim 8, is directed to statutory subject matter. Dependent claims 9–11, not separately argued, fall with independent claim 8. Therefore, we sustain the rejection of claims 8–11 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

35 U.S.C. § 103(a): Claims 5–10

Appellants assert their invention is not obvious over Zhou, Kiran, and AAPA (App. Br. 9–13). The issue presented by the arguments is:

Issue 2: Has the Examiner erred in finding the combination of Zhou, Kiran, and AAPA teaches or suggests the invention as recited in independent claims 5 and 8?

ANALYSIS

Appellants assert Zhou teaches processing a list of tasks (App. Br. 12). According to Appellants, in Zhou's Figure 7,

> [s]o long as the list of tasks is not empty, "subtasks" can be selected from an XSLT Subtask List. However, nothing in Figure 7 indicates that the "subtasks" in the XSLT Subtask List are tasks of a job—compared by the Examiner to the tasks in the task lists. Rather the subtasks of the XSLT Subtask List are independent of the tasks in the task list.

(*id.*).

We are not persuaded by Appellants' argument. The Examiner relies on the combination of Zhou and Kiran to teach the invention as recited; however, Appellants are arguing the references individually. Specifically, the Examiner relies on Zhou as teaching the subtasks (jobs) (Ans. 11; Non-

Final Act. 9) and Kiran as teaching a task is associated with a different job (Non-Final Act. 9). We find Kiran teaches a program (job) is comprised of segments (tasks) (Kiran, §Summary).

We further note Appellants' Specification does not explicitly define the terms "job" or "task." Thus, nothing in the claim language or Specification precludes a "job" from comprising one "task."

Accordingly, we are not persuaded the Examiner erred in finding the combination of Zhou, Kiran, and AAPA teaches or suggests the limitations as recited in independent claims 5 and 8 and dependent claims 6, 7, 9, and 10, not separately argued. Therefore, we sustain the rejection of claims 5–10 under 35 U.S.C. § 103(a) for obviousness over Zhou, Kiran, and AAPA.

35 U.S.C. § 103(a): Claim 11

Appellants do not separately argue claim 11, instead relying on the reasons argued with respect to claims 5–10 (App. Br. 13). For the reasons set forth above, we sustain the rejection of claim 11 under 35 U.S.C. § 103(a) for obviousness over Zhou, Kiran, AAPA, and Borkenhagen.

DECISION

The Examiner's rejection of claims 8–11 under 35 U.S.C. § 101 as being directed to non-statutory subject matter is affirmed.

The Examiner's rejection of claims 5–10 under 35 U.S.C. § 103(a) as being unpatentable over Zhou, Kiran, and AAPA is affirmed.

The Examiner's rejection of claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Zhou, Kiran, AAPA, and Borkenhagen is affirmed.

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

AFFIRMED