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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JASON MAST

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Appeal 2014-006920  
Application 12/774,787  
Technology Center 3600

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Before ANTON W. FETTING, NINA L. MEDLOCK, and  
TARA L. HUTCHINGS, *Administrative Patent Judges*.

FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE<sup>1</sup>

Jason Mast (Appellant) seeks review under 35 U.S.C. § 134 from a final rejection of claims 1–4 and 6–15, the only claims pending in the application on appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

The Appellant invented an architecture for processing level 2 financial data and, in particular, for expanded processing of financial data from raw

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<sup>1</sup> Our decision will make reference to the Appellant’s Appeal Brief (“App. Br.,” filed October 7, 2013) and Reply Brief (“Reply Br.,” filed May 28, 2014), and the Examiner’s Answer (“Ans.,” mailed January 15, 2014), and Final Action (“Final Act.,” mailed September 9, 2013).

financial data feeds using newly identified processing criteria and using newly created processing architectures to produce custom sets of processed level 2 financial as desired by a particular client. Spec. 1:5–9.

An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below (bracketed matter and some paragraphing added).

1. A system for processing level two financial data, the system having an extensible software architecture and comprising:

[1] a computing device having computing capabilities and capable of executing an extendible software architecture;

[2] a stock feed normalizer for receiving and processing raw stock information;

[3] an object orderer for receiving a normalized stock information in a stock feed;

[4] a constituent component which will analyze the data contained in the feed accounting predefined criteria,

said constituent component comprising a dynamic key generator

for creating keys for processing stock information

according to predetermined criteria of a particular client;

and

[5] a book publisher for

receiving processed data from said constituent component

and then

formatting the received processed data for delivery to a client,

the data being formatted in accordance with parameters predetermined by the client.

The Examiner relies upon the following prior art:

Parsons	US 4,486,853	Dec. 4, 1984
Williams	US 2002/0055899 A1	May 9, 2002
Rotman et al.	US 2003/0018550 A1	Jan. 23, 2003
Kobayashi	US 6,686,908 B1	Feb. 3, 2004
Carmeli et al.	US 2008/0107272 A1	May 8, 2008

Claims 1–4 and 6–15 stand rejected under 35 U.S.C. § 101 as directed to non–statutory subject matter.

Claims 1–4 and 6–15 stand rejected under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the invention.

Claims 1–4, 6–8, and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Williams, Rotman, and Parsons.

Claims 9–11 and 13–15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Williams, Rotman, Parsons, and Carmeli.

Claims 1–4, 6, and 7 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Williams, Rotman, and Kobayashi.

## ISSUES

The issues of statutory subject matter and obviousness turn primarily on whether indexing and sorting keys improve computer performance and whether the art applied dynamically creates such keys.

## FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

### *Facts Related to Claim Construction*

01. Level 2 market data provides the most comprehensive and in depth set of data available on trading activity. Spec. 2:28–29.
02. The Specification provides no lexicographic definition of a key.

### *Facts Related to Appellant's Disclosure*

03. The Specification tends to use the word “key” as an index or sorting parameter. *See* Spec. 5:2–14.
04. How the key generator turns an incoming order into a key determines how the data is ultimately sorted. Spec. 10:24–25.

### *Facts Related to the Prior Art*

#### *Williams*

05. Williams is directed to displaying large amounts of data in various forms on a display terminal to improve the ease with which the information may be viewed, and more particularly to presenting a large amount of financial data, in real time, on a computer display terminal in a logically organized manner to aid a user in evaluating and assimilating the financial information much more easily and quickly than with prior information presentation systems. Williams, para. 1.

#### *Rotman*

06. Rotman is directed to financial transaction data and systems and particularly to compiling financial transaction data and processing such data to provide financial information. Rotman, para. 3.

*Parsons*

07. Parsons is directed to receiving a stream of encoded data comprising a plurality of data groups and selectively identifying the data messages to be further processed. Parsons 3:3–6.
08. Parsons describes the particular sequence of actuating the keys of the keyboard to obtain data with regard to a security or to teach the device to receive updated information concerning a particular security. To teach or code the receiver/display device to follow a stock, the user enters the stock symbol, followed by the enter button, and then a single letter as a key designating a memory location. The user can store up to 20 stocks in this manner and recall quotes on any of the stored stocks with two simple keystrokes: the quote key and the single letter key corresponding to its memory location. Parsons 19:50–20:31.

*Carmeli*

09. Carmeli is directed to providing access control for published information, and in particular to access control in a multicast publish/subscribe system. Carmeli, para. 1.

*Kobayashi*

10. Kobayashi is directed to a key input device and an information terminal device which perform key assignment by use of information memory medium, such as an IC card and the like. Kobayashi 1:6–10.
11. Kobayashi generates keys as metaphoric data entry keys, not as index keys. *See* Kobayashi 1:36–2:19.

## ANALYSIS

Claim 1 is to a system, claim 8 is to a method, and claim 12 is to a computer program product. Each of these independent claims recites generating indexing and sorting keys for processing the received data and then processing the received data based on the set of identified parameters or structure for doing so.

*Claims 1–4 and 6–15 rejected under 35 U.S.C. § 101  
as directed to non–statutory subject matter*

We are persuaded by Appellant’s argument that the claims perform a transformation. App. Br. 6. All of the independent claims recite processing data according to a dynamically constructed sorting and indexing key. App. Br. 6. The use of such keys are notoriously well known for improving computer performance. The dynamic construction further improves performance by automating the selection of such keys.

*Claims 1–4 and 6–15 rejected under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the invention*

We are persuaded by Appellant’s argument that the Examiner’s questions forming the substance of the rejection are adequately answered. Reply Br. 4–5.

*Claims 1–4, 6–8, and 12 rejected under 35 U.S.C. § 103(a)  
as unpatentable over Williams, Rotman, and Parsons*

We are persuaded by Appellant’s argument that:

With regards to the limitation of the present invention of a dynamic key generator for creating keys for processing stock information according to predetermined criteria, contrary to the examiner’s assertion, Parsons does not teach or suggest generating or creating keys. Parsons’ invention focuses on

storing selected data messages in memory locations. Parsons also performs comparisons of newly stored data with previously stored data for the person of updating information. Parsons does not teach or suggest the dynamic key generator for processing stock information as described in the present invention.

App. Br. 8.

The initial issue is the scope of the word “key” recited in the claims. “Key” is one of those words that have wildly different meanings in different contexts. The Examiner cites a portion of Parsons that assigns stock symbols to keyboard keys. Ans. 8–9. Thus, in Parsons, the keyboard keys act as keys both in the sense of data entry keys and indexing keys. The Examiner does not clarify in which sense the keys of Parson are interpreted. But data entry keys differ completely from indexing keys. They are not two species of one genus, other than in the sense of dictionary entries. This is not a case of breadth, but of which interpretation is appropriate.

If they are interpreted as indexing keys, consistent with the meaning in the record before us, Parsons does not dynamically create such keys based on predetermined criteria, but instead requires a user to explicitly enter the key by physically pressing the key. If they are interpreted as data entry keys, then Parsons fails to describe the keys recited in the claims within the context of the record before us.

The Patent and Trademark Office determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction “in light of the specification as it would be interpreted by one of ordinary skill in the art.” *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).



The Office does not import the Specification into the claims. *Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d at 1369.

Nevertheless, as to consistency with the Specification, this requirement has been circumscribed as “[w]hile the Board must give the terms their broadest reasonable construction, the construction cannot be divorced from the specification and the record evidence.” *In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011).

An interpretation of Parsons’s keys as data entry keys would be divorced from the Specification and the record evidence.

*Claims 9–11 and 13–15 rejected under 35 U.S.C. § 103(a)  
as unpatentable over Williams, Rotman, Parsons, and Carmeli*

These claims depend from the independent claims above.

*Claims 1–4, 6, and 7 rejected under 35 U.S.C. § 103(a)  
as unpatentable over Williams, Rotman, and Kobayashi*

Kobayashi, applied as an alternative to Parsons, describes dynamically creating data entry keys. Thus, although here the Examiner gets past the problem with Parsons not dynamically creating keys, the keys in Kobayashi are not sorting and indexing keys.

#### CONCLUSIONS OF LAW

The rejection of claims 1–4 and 6–15 under 35 U.S.C. § 101 as directed to non–statutory subject matter is improper.

The rejection of claims 1–4 and 6–15 under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the invention is improper.

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The rejection of claims 1–4, 6–8, and 12 under 35 U.S.C. § 103(a) as unpatentable over Williams, Rotman, and Parsons is improper.

The rejection of claims 9–11 and 13–15 under 35 U.S.C. § 103(a) as unpatentable over Williams, Rotman, Parsons, and Carmeli is improper.

The rejection of claims 1–4, 6, and 7 under 35 U.S.C. § 103(a) as unpatentable over Williams, Rotman, and Kobayashi is improper.

#### DECISION

The rejection of claims 1–4 and 6–15 is reversed.

REVERSED