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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN SMITH, MUKESH DALAL,
MARCUS VINCENT, and GREG WASHBURN

Appeal 2015-002782
Application 13/081,467
Technology Center 2100

Before BRUCE R. WINSOR, MICHAEL J. STRAUSS, and
AMBER L. HAGY, *Administrative Patent Judges*.

STRAUSS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

THE INVENTION

The claims are directed to defining and populating segments to facilitate automated data analysis and automated experimentation based on user interaction with web pages, web sites, and other user interfaces, as well as for carrying out automated tasks related to users who can be partitioned.

Abstract.

Claim 1, reproduced below, is representative of the claimed subject matter:

1. A segment-definition-language based segment subsystem of a computer system, the segment-definition-language based segment subsystem comprising:

a segment-administration component that

receives segment descriptions encoded in the segment-definition language from executing application programs,

stores segment descriptions encoded in the segment-definition language in one or more of electronic memory, one or more mass-storage devices, and database-management systems,

retrieves segment descriptions encoded in the segment-definition language from one or more of electronic memory, one or more mass-storage devices, and database-management systems,

returns segment descriptions to executing application programs, and

generates, from a segment description encoded in the segment-definition language, one or more queries and/or routines that, when executed, extract visitor data objects from one or more data sources corresponding to the segment defined by the segment description; and

a segment-execution component that executes one or more queries and/or routines generated by the segment-administration component to retrieve data from one or more data sources and to assemble, from the retrieved data, a set of visitor data objects.

REFERENCES

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

Thomas	US 6,128,663	Oct. 3, 2000
Morris	US 2004/0078227 A1	Apr. 22, 2004
Vallier	US 2008/0059282 A1	Mar. 6, 2008
Cohen	US 2008/0306794 A1	Dec. 11, 2008

REJECTIONS

The Examiner made the following rejections:

Claim 1 stands rejected under 35 U.S.C. § 101 as directed toward software *per se* without a tangible embodiment in its broadest reasonable interpretation. Final Act. 2.

Claims 1–4, 6, and 17–20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas and Cohen. Final Act. 3–7.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas, Cohen, and Vallier. Final Act. 7–8.

Claims 7, 8, and 13–16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas, Cohen, and Steele. Final Act. 8–9.

Claims 9 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas, Cohen, Vallier, and Steele. Final Act. 9–10.

Claims 10 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas, Cohen, Vallier, and Morris. Final Act. 10–11.

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments the Examiner has erred. In connection with the rejection under 35 U.S.C. § 101, we agree with Appellants in concluding the rejection is improper. However, in connection with the rejections under 35 U.S.C. § 103(a), we disagree with Appellants' conclusions and, instead, adopt as our own (1) the findings and reasons set forth by the Examiner in the Final Office Action from which this appeal is taken (Final Act. 3–13) and (2) the

reasons set forth by the Examiner in the Examiner's Answer in response to Appellants' Appeal Brief (Ans. 4–17) and concur with the conclusions reached by the Examiner. We highlight the following for emphasis.

A. 35 U.S.C. § 101

The Examiner rejects claim 1 as including subject matter not covered under 35 U.S.C. § 101, i.e., software *per se*. Final Act. 2. The Examiner finds, although the preamble of claim 1 recites a computer system, the claim is directed only to a *subsystem* of the computer system, i.e., a segment-definition-language based subsystem comprising (i) a segment-administration component and (ii) a segment-execution component, which are both defined in the body of the claim. *Id.* To address the issue, the Examiner suggests Appellants consider adding a requirement that the software be stored on a non-transitory computer-readable storage medium. *Id.*

Appellants contend the suggested addition would unnecessarily and inappropriately change the scope of the claim, and they decline to adopt the suggested change. App. Br. 6. Appellants direct attention to the Specification for disclosing the disputed segment-definition-language (SDL) subsystem of claim 1 “is a tangible, physical component of the computer system comprising computer instructions that are stored within a computer-readable, medium, including electronic memory and/or mass-storage devices, for execution on one of more processors within the computer system to control the computer system to provide SDL functionality.” App. Br. 7 (quoting Spec. p. 29, l. 3 *et seq.*) (emphasis omitted). Appellants argue the Examiner's interpretation of claim 1 as including software *per se* is

improper because it is contrary to the express language of the Specification.
Id.

The Examiner responds by finding that limiting the SDL subsystem by requiring a storage medium is not effective to avoid coverage of transient signals, which are improper subject matter under 35 U.S.C. § 101. Ans. 2–3. The Examiner finds merely including a physical or tangible requirement (e.g., a wire) fails to exclude transient media. Ans. 3. Appellants reply by, *inter alia*, questioning the Examiner’s competence and characterizing the Examiner’s suggested claim amendment as “ridiculous.”¹ Reply Br. 4. Addressing transient signals, Appellants argue:

¹ We remind Appellants of the requirement to conduct all business with the Office with decorum and courtesy.

Applicants and their attorneys or agents are required to conduct their business with the United States Patent and Trademark Office with decorum and courtesy. Papers presented in violation of this requirement will be submitted to the Director and will not be entered. A notice of the non-entry of the paper will be provided. Complaints against examiners and other employees must be made in correspondence separate from other papers.

37 C.F.R. § 1.3 (“**BUSINESS TO BE CONDUCTED WITH DECORUM AND COURTESY**”).

We note multiple occasions where Appellants disparage the Examiner’s findings and analysis, e.g., “the Examiner’s bizarre assertion . . .” (Reply Br. 4); “[c]an it be possible that the Examiner is so completely unfamiliar with modern science and technology that the Examiner does not understand that . . .” (*id.*); “[t]he Examiner’s suggested claim amendment is ridiculous . . .” (*id.*); “Appellants’ representative is left to wonder . . . whether there is any supervisory oversight at the USPTO during the examination process . . .” (Reply Br. 6). We find snide comments such as these do not represent Appellants’ best interests, arguably violate at least the spirit of Rule 1.3, and are not helpful in aiding the Board in properly resolving the issues necessary to render a decision on the merits.

The fact that computers include signal lines and other media through which signals are transmitted does not render computer systems rejectable under 35 U.S.C. §101, as would be obvious to anyone familiar with but a few of the probably many thousands to hundreds of thousands or more of issued patents directed to computer technologies, the vast bulk of the claims in which are not directed to computer-readable storage media.

Reply Br. 5.

We agree with Appellants that claim 1 is limited to patentable subject matter under 35 U.S.C. § 101, but we rely on a different rationale. In particular, we conclude the claimed “segment-definition-language based segment subsystem” comprises two limitations—the “segment-administration component” and “segment-execution component”—that must be interpreted as “means-plus-function” (MPF) elements in accordance with 35 U.S.C. § 112, 6th paragraph. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015); *Manual of Patent Examining Procedure* (MPEP) § 2181 (9th Ed., Rev. 07.2015, Nov. 2015). In particular, we find the recited term “component” is but a generic placeholder that fails to constitute a recognized name for structure that performs the required functions. This generic placeholder is modified by purely functional language devoid of specific structure for achieving the specified function. Therefore, the “component” limitations recited in claim 1 are to be interpreted under 35 U.S.C. § 112, 6th paragraph, such that we construe them to cover the corresponding *structure* described in the Specification and equivalents thereof.

Turning to the Specification, we agree with Appellants that the Specification discloses the claimed segment-definition-language segment subsystem comprises “computer instructions that are stored within a

computer-readable, medium, including *electronic memory and/or mass-storage devices.*” App. Br. 7 (quoting Spec. p. 29, l. 3 *et seq.*) (emphasis added). With regard to the claimed components, the Specification further discloses:

Both the segment-administration and segment-execution components are implemented by computer instructions, *stored within the computer system on a computer-readable medium, such as in electronic memory or on mass-storage devices*, to control the computer system to provide SDL functionality to various different types of application programs executing with the computer system.

Spec. p. 28, ll. 21–26 (emphasis added).

Accordingly, the “component” limitations in claim 1 require *structure* in the form of electronic memory and/or mass-storage devices and, thereby, are not limited to software *per se*. See MPEP § 1281(B).² Furthermore,

² Often the supporting disclosure for a computer-implemented invention discusses the implementation of the functionality of the invention through hardware, software, or a combination of both. In this situation, a question can arise as to which mode of implementation supports the means-plus-function limitation. The language of 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph requires that the recited “means” for performing the specified function shall be construed to cover the corresponding “structure or material” described in the specification and equivalents thereof. Therefore, by choosing to use a means-plus-function limitation and invoke 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, applicant limits that claim limitation to the disclosed structure, i.e., implementation by hardware or the combination of hardware and software, and equivalents thereof. Therefore, the examiner should not construe the limitation as covering pure software implementation.

MPEP § 2181(B).

because the recited “component[s]” are “stored *within* the computer system,” we conclude the disclosed structure limits the claim to non-transitory embodiments. *See Ex parte Mewherter*, 107 USPQ2d 1857, 1860 n.5 (factor (4)) (PTAB 2013). Accordingly, we do not sustain the rejection of claim 1 under 35 U.S.C. § 101.

B. 35 U.S.C. § 103(a)

Claim 1 — Thomas

Appellants contend “[a]lthough Thomas discloses a system for adapting web page content based on demographic information, the demographic information is not encoded in a segment definition language [as required by claim 1].” App. Br. 16. Appellants acknowledge Thomas discloses techniques for transmitting demographic information, but argue Thomas does not disclose how the information is encoded or transmitted. *Id.* According to Appellants, rather than encode demographic information in a segment-definition language (SDL), Thomas uses demographic identifiers that act as references to demographic information stored elsewhere. App. Br. 18. Appellants further argue Thomas’s reference identifiers are non-portable and server-specific in contrast to the claimed SDL-encoded segment, which provides full segment definition. App. Br. 20. Appellants direct attention in particular to the Specification at page 33, lines 10–30 disclosing a structured markup language including segment information for city visitors. *Id.*

The Examiner responds, finding the Specification discloses segments pertain to demographics, e.g., market segments. Ans. 5–6. The Examiner further finds, because Thomas passes demographic information, it must encode the information and thereby satisfies the requirement to use a

segment definition language. Ans. 6–7. According to the Examiner, “[b]ecause the appellant fails to distinguish or further limit what constitutes a ‘segment definition language’ any digital computing representation of demographic information reads upon a ‘segment definition language.’” Ans. 6. The Examiner further finds Thomas discloses using an HTML page with embedded demographic used to select an advertising banner. Ans. 7.

In reply, Appellants argue Thomas’s identifiers are non-portable because they “can only be converted into demographics information by the demographics-identifying server that stores that demographics information.” Reply Br. 10. Appellants reply to the Examiner’s position that any digital computing representation of demographic information reads upon a segment definition language, arguing the Examiner’s position is not supported by case law, rule, or statute. Reply Br. 14. Instead, Appellants argue,

No one familiar with modem science and technology could possibly assert that the string “DEMO-ID00A459FF” is representative of a demographic segment. It is simply a string of letters and numbers. Thomas’s reference identifiers reference, to a particular server, demographic information stored on the server. The server can look up the string in a table that maps such strings to memory or disk locations, and then can use the memory or disk locations to recover demographic information.

Reply Br. 14. Appellants admit the disputed “‘segment definition language’ does not have a well-established meaning in the art” but is “introduced” and “explained” in the Specification. Reply Br. 17. According to Appellants, Thomas’s alphanumeric character strings cannot be interpreted as a segment definition language because it “contains no demographic information, contains no statements, and has neither semantics [n]or syntax. It is an arbitrary character string that Thomas’s server can find in a table associated

with a memory reference, disk address, or other such pointer to stored demographic information.” Reply Br. 17–18.

Appellants’ arguments are not persuasive of Examiner error. Appellants rely on mere attorney argument and examples of specific implementations of a segment definition language as bases for arguments. However, these arguments are not supported by a broad but reasonable interpretation of the disputed claim language. Appellants provide insufficient evidence the claimed segment definition language should be interpreted more narrowly than construed by the Examiner. “[T]he PTO gives claims their ‘broadest reasonable interpretation.’” *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000)). “Moreover, limitations are not to be read into the claims from the specification.” *In re Van Geuns*, 988 F.2d 1181, 1184, (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989)). Although Appellants’ Specification provides an example of a segment definition language having the argued characteristics including, for example, an extensible markup language (XML) type of format and touts its advantages over prior art using only structured query language (SQL) (*see, e.g.*, Spec. 2), we decline to import limitations implied by such examples into the claims. In particular, although we agree with Appellants that “[t]he sample identifiers provided by Thomas, ‘00A459FF’ and ‘0015,’ do not exhibit a language structure like the example [disclosed at page 33 of] the current application” (App. Br. 20), we do not agree the term “segment definition language” must include specific data such as the argued visitors’ city and gender defining a market segment (*see id.*).

Even if inclusion of the word “language” as part of the argued terminology were itself limiting, Appellants fail to provide a construction identifying the metes and bounds of any such limitations in support of their contention of error. In contrast, there are ample examples of systems and vocabularies characterized as languages that include no more than provided by Thomas’s identifiers. For example, computer “machine language” is merely a sequence of bits commanding a processor to execute a particular instruction and “assembly language” a set of abbreviations or mnemonic codes, each statement corresponding to a single machine instruction. *See* MICROSOFT COMPUTER DICTIONARY 37, 322 (5th ed. 2002). Therefore, we agree with Examiner in concluding Appellants’ argued interpretation is unduly narrow and, therefore, Appellant’s associated arguments are not commensurate with the scope of claim 1. *See* Ans. 7–10.

In addition to Thomas’s identifiers, the Examiner finds Thomas discloses using a form of XML, i.e., an HTML page, with embedded demographic information to select an advertising banner based on the demographic information. Ans. 7. Thus, Thomas teaches or suggests the use of a standardized, portable structured language as exemplified by the argued segment definition language embodiment disclosed throughout Appellants’ Specification. *See, e.g.*, Spec. p. 33.

Therefore, on the record before us, and in the absence of sufficient evidence or reasoned argument in support of Appellants’ rebuttal, we agree with the Examiner in finding Thomas teaches or suggests segment descriptions encoded in a segment definition language as recited in the first element of claim 1.

Claim 1 — Cohen

Appellants contend the Examiner has misread the Cohen reference and uses it “to teach elements that are not even recited in the claims,” i.e., embedded measurements for the effectiveness of demographic tuning and to provide further tuning. App. Br. 24. Appellants further argue “Cohen sends position and display information back to the web server. It does not return visitor data objects, or anything analogous to visitor data objects [as required by claim 1].” App. Br. 25. According to Appellants “[t]he Examiner has not provided any explanation of how Cohen supposedly generates queries from SDL-encoded segments, executes those queries, and then retrieves visitor data objects.” *Id.*

The Examiner responds by explaining Cohen’s tuning elements were not relied upon for teaching an element of the claims, but included as part of the rationale for combining the teachings of Cohen and Thomas. Ans. 11. The Examiner further finds Cohen’s disclosure of

tailing a user’s browsing and viewing habits and sending said information back is a routine which creates “visitor data objects” from a user visiting the page and sends said information back to the server for correlation to demographic information – thus making it “correspond to a segment defined by a segment description[.]”

Id.

Appellants’ contention is unpersuasive of Examiner error. In connection with the generating step and the functionality provided by the segment-execution component of claim 1, Appellants provide insufficient evidence or argument to persuade us Cohen’s tailing, although not specific to a segment-definition language (for which the Examiner relies on Thomas), fails to extract visitor objects, i.e., display elements visible on a

web page or “demographic information” corresponding segment defined by a segment description as require by claim 1. Although Appellants incorporate lengthy quotations from the Final Office Action, Specification, and Cohen into the Appeal Brief, Appellants’ substantive argument (App. Br. 25) amounts to little more than general denial that fails to address the Examiner’s findings and is, therefore, insufficient. *See* 37 C.F.R. § 41.37(c)(1)(iv) (“A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim.”); *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (“[W]e hold that the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art.”) For example, Appellants fail to explain why Cohen’s tracking of the exposure of web page elements using a *Tail* to provide reports regarding the position and size of the browser viewport fails to teach or suggest extracting visitor data (e.g., what is being viewed.) To the extent Appellants argue Cohen is deficient for failing to disclose a segment description encoded in the segment-definition language (App. Br. 28), such argument fails to address the Examiner’s findings with regard to Thomas in connection with this element (*see* discussion *infra*). Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Claim 2

Appellants contend, in rejecting claim 2, “the Examiner has made no attempt to link the language of claim 2 to specific citations to the references.” App. Br. 29. Accordingly, Appellants argue the Examiner’s rejection of independent claim 2 is deficient for the same reasons argued in connection with independent claim 1. *Id.* Appellants further contend “[t]he combination [of] Thomas and Cohen does not produce a system that processes a segment definition to extract information from a data source and assemble the extracted information into visitor data objects as recited in claim 2.” App. Br. 32 (emphasis omitted). Appellants argue “Cohen sends position and display information back to the web server. It does not return visitor data objects, or anything analogous to visitor data objects.” *Id.*

Appellants’ arguments are unpersuasive for the reasons discussed in connection with claim 1 above. For example, Appellants fail to provide a construction of the disputed visitor data objects including specific required features together with the bases for the requirements that distinguish over Cohen’s position information. Again, a general denial is insufficient. *See* 37 C.F.R. § 41.37(c)(1)(iv). Instead, under a broad but reasonable interpretation, we find Cohen’s tracking of the exposure of web page elements using a *Tail* to provide reports regarding the position and size of the browser viewport teaches or suggests producing visitor data. Therefore, we agree with the Examiner in finding the combination of Thomas and Cohen teaches or suggests the disputed limitations of claim 2. *See* Ans. 13–14.

Claim 3

In connection with claim 3, Appellants additionally contend Cohen does not teach the execution of segments because “[i]t does not describe a segment in any way.” App. Br. 34. The Examiner responds by finding Thomas discloses a translation from a demographic segment to the execution of a demographically-tuned web page. Ans. 15. According to the Examiner, “[f]rom Thomas alone it is already clear that a ‘segment definition’ is translated into an ‘executable segment definition’ in the form of execution of a modified HTML page.” *Id.*

Appellants’ contention arguing deficiencies of Cohen is unpersuasive of Examiner error for failure to address the Examiner’s findings that Thomas teaches or suggests the disputed segment requirement.

Claim 4

Appellants contend, rather than disclose use of an alphanumeric statement as required by claim 4, Thomas uses “uses indecipherable demographic reference identifiers to communicate demographic information.” App. Br. 36. Appellants further argue “[t]he fact that HTML is alphanumeric is irrelevant, since no reference cited by the Examiner uses HTML to communicate demographic information.” *Id.* Likewise, Appellants argue Cohen fails to teach or suggest coherent alphanumeric program statements.

In response, the Examiner finds “[a]ny data stored on a computing system can be considered ‘alphanumeric’ on at least an obvious basis as it would have been at least obvious to one of ordinary skill in the art at the time of the invention to represent data bits as the alphanumeric

‘hexadecimal.’” Ans. 16. The Examiner further finds Thomas’s modification of an HTML page using demographic information specifically mentions embedding the demographic information in the web page thereby teaching or suggesting the disputed alphanumeric statements. *Id.*

We again find Appellants’ argument unpersuasive of Examiner error. Appellants provide insufficient evidence or argument rebutting the Examiner’s finding that either normal hexadecimal representation (which includes the alpha characters A–F representing the values 10–15, respectively) or HTML teach or suggest including one or more alphanumeric statements as part of the segment definition. In particular, Appellants fail to identify an appropriate construction of the disputed alphanumeric statements together with support therefor that, under a broad but reasonable interpretation, distinguishes over the applied prior art.

Conclusion on 35 U.S.C. § 103(a) Rejections

For the reasons discussed *supra*, we are unpersuaded of Examiner error. Accordingly, we sustain the rejections of independent claims 1 and 2 and dependent claims 3 and 4 under 35 U.S.C. § 103(a) over Thomas and Cohen, together with the rejection of dependent claims 6 and 17–20 that are not argued separately. Furthermore, we sustain the rejections of dependent claims 5 and 7–16 under 35 U.S.C. § 103(a), these dependent claims also not argued separately.

DECISION

The Examiner’s decision to reject claim 1 under 35 U.S.C. § 101 is reversed.

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The Examiner's decision to reject claims 1–20 under 35 U.S.C. § 103(a) is affirmed.

Since we have affirmed at least one ground of rejection with respect to each claim on appeal, the Examiner's decision is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

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