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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ZHUO MENG, PETER J. HERRERA, BAOFU DUAN, and RONALD J. CASS

Appeal 2016-000113
Application 11/844,507[1]
Technology Center 2100

Before THU A. DANG, JOHN D. HAMANN, and JOYCE CRAIG, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants file this appeal under 35 U.S.C. § 134(a) from the Examiner's Non-Final Rejection of claims 1–3, 5–13, 15–23, and 25–39. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

THE CLAIMED INVENTION

Appellants' claimed invention relates to the "precise handling of duration values in automated systems, [including] . . . to precisely determining a duration of a time period between temporally separated

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[1] According to Appellants, the real party in interest is CA, Inc. App. Br. 2.

events." Spec. ¶ 1. Claim 1 is illustrative of the subject matter of the appeal and is reproduced below.

> 1. A method to precisely handle a duration expression having a potentially indeterminate duration value, the method comprising:
>
> providing, at a computing device, a data type that combines a duration expression with an attribute that represents a start datetime, wherein the duration expression comprises one string having an indeterminate duration component to represent a duration of time, wherein the indeterminate duration component causes the represented duration of time to have an indeterminate temporal length depending on when the represented duration of time begins or ends, and wherein the duration expression has a standardized format represented using a programming language that comprises a schema definition for lexically representing the duration expression in the standardized format, and wherein the attribute that represents the start datetime makes the indeterminate duration component determinate;
>
> parsing the provided data type to evaluate the indeterminate duration component in the duration expression and the attribute that represents the start datetime to determine a precise temporal length associated with the duration of time represented by the indeterminate duration component; and
>
> creating a new data type that combines the duration expression or a new duration expression with an attribute that represents the start datetime or a new start datetime, wherein the new data type is created using an operator that determines a value of the new duration expression or of the new start datetime, based on the precise temporal length.

REJECTIONS ON APPEAL

(1) The Examiner rejected claims 1–3, 5–13, 15–23, 25–30, and 34–39 under 35 U.S.C. § 103(a) as being unpatentable over the combination of (i) "*Date calculator: Add to or subtract from a date*" and resultant "*Calculations results*," WaybackMachine archive of www.timeanddate.com (http://web.archive.org/web/20050729004842/http://www.timeanddate.com/date/dateadd.html) (last visited Oct. 28, 2014) (hereinafter "TimeAndDate") and (ii) Frank P. Westlake, *timemath.exe* v. 0.91 (2001) (http://www.computing.net/answers/programming/batch-timedate-calculator/15453.html) (last visited Feb. 24, 2010) (hereinafter "TimeMath").

(2) The Examiner rejected claims 31–33 under 35 U.S.C. § 103(a) as being unpatentable over the combination of TimeAndDate, TimeMath, and Biron et al., *XML Schema Part 2: Datatypes* (2d ed.).

(3) The Examiner rejected claims 11–13, 15–20, 32, and 38 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.[2]

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' contentions that the Examiner erred. In reaching our decision, we consider all evidence presented and all arguments made by Appellants.

We disagree with Appellants' arguments, and we incorporate herein and adopt as our own the findings, conclusions, and reasons set forth by the Examiner in (1) the November 6, 2014 Non-Final Office Action ("Non-Final Act." 2–20) and (2) the July 17, 2015 Examiner's Answer (Ans. 2–9). We

[2] The Examiner's 35 U.S.C. § 101 rejection was entered as a new ground of rejection in the Examiner's Answer. Ans. 2–3.

highlight and address, however, specific findings and arguments below for emphasis.

(1) Data type and new data type

Appellants argue the Examiner errs in finding the combination of TimeAndDate and TimeMath, and TimeAndDate in particular, teaches or suggests both a "data type" and a "new data type," in accordance with claims 1, 11, 21, and 34–36. App. Br. 9–10; Reply Br. 4–5. Specifically, Appellants argue the Examiner incorrectly relies upon the same URL — TimeAndDate's page 2 URL (i.e., "http//www.timeanddate.com/date/dateadded.html?m1 =6&d1=4&y1 =1974&type=add&ay=35&am=&ad=&aw=") (hereinafter "page 2 URL") — for both the data type and new data type. App. Br. 9–10 (citing TimeAndDate 2 (showing the URL string for the Calculations results page based on page 1 user inputs of month 6, day 4, year 1974, add, and years 35)); Reply Br. 4.

Appellants also argue TimeAndDate's teachings concerning its "Make a new calculation" link (i.e., making a second calculation after already obtaining calculation results from the initial add date page) are insufficient to teach or suggest creating a new data type because TimeAndDate is silent as to what exactly occurs, including as to any type or format of any results, upon selecting the link. *See* App. Br. 10. In particular, Appellants argue TimeAndDate fails to teach or suggest, in response to clicking on "Make a new calculation," that a URL string will be generated that combines the duration expression (e.g., 35 years) with a start date (e.g., June 4, 1974) or a new start date (e.g., June 4, 2009). *Id.*

Additionally, Appellants argue TimeAndDate fails to teach or suggest "the new data type is created using an operator that determines a value of the

new duration expression or of the new start datetime, based on the precise temporal length," as recited in claim 1. App. Br. 10–13; Reply Br. 4–6. Specifically, Appellants argue the combination fails to teach or suggest parsing the provided data type (e.g., page 2 URL) for the indeterminate duration component (e.g., 35 years) to determine a precise temporal length for use in creating the new data type in accordance with claim 1. App. Br. 10–11. As above, Appellants again argue TimeAndDate fails to teach or suggest "'a result page'" or "'a resulting date generated by a new calculation" — Appellants argue the Examiner relies on "mere[] unsubstantiated speculation." App. Br. 11; Reply Br. 4–5. We find Appellants' arguments unpersuasive.

The Examiner finds, and we agree, the combination, and TimeAndDate in particular, teaches or suggests the provided data type and the created new data type. *See* Ans. 3–6; Non-Final Act. 3–4. As to the provided data type, the Examiner finds, and we agree, TimeAndDate's page 2 URL string teaches or suggests the data type. *See* Non-Final Act. 3 (citing page 2 URL (finding the URL data type includes a duration expression (i.e., 35 years — &ay=35) and an attribute of a start datetime (i.e., June 4, 1974 —?m1=6&d1=4&y1=1974)).

As to the new data type, the Examiner finds, and we agree, TimeAndDate's "Make a new calculation" feature teaches or suggests it. Ans. 3–4 (citing TimeAndDate 2 (making a new calculation by clicking the link "New calculation with Thursday, June 4, 2009" where "June 4, 2009 is the result date that was previously generated by the system as result of adding 35 years to the starting date of June 4, 1974")). Specifically, the Examiner finds, and we agree, TimeAndDate teaches or suggests allowing a user to generate an entirely new calculation and calculation results page (i.e.,

a second URL string) using the generated results (e.g., using the calculated date as the new start datetime) and duration or by modifying the starting datetime (i.e., a new start datetime) or duration (i.e., a new duration expression) using the "Modify the current calculation" link. *Id.* (citing TimeAndDate 1–4). Furthermore, the Examiner finds, and we agree, the combination teaches or suggests parsing the data type for the indeterminate duration component (e.g., 35 years[3], "&ay=35") and using an operator that determines the appropriate value based on the precise temporal length. *Id.* at 4–5 (citing TimeAndDate 2, 4 (showing reliable results based on the precise length)); Non-Final Act. 5 (citing TimeMath 2 (teaching parsing a command line)).

We disagree with Appellants that the Examiner's findings rely upon TimeAndDate's page 2 URL for both data types. Rather, the specific page 2 URL teaches or suggests the provided data type, and TimeAndDate's teachings regarding the format of the URL and corresponding entered values teaches, or at least suggests, the new data type (i.e., a second URL string from a Calculation results page of a second calculation, such as making a new calculation of adding 35 years (the original duration expression) to June 4, 2009 (the new start datetime)). *See* TimeAndDate 1–2; *see also* TimeAndDate 3–4 (providing additional examples of URLs and their format for dates and durations); Ans. 5–6 (stating when the new calculation with a date (e.g., September 6, 2004) link was clicked, the input page returns with the input fields populated with the appropriate data). We also disagree with

[3] Appellants' Specification explains the standard duration value assumes a year of three hundred and sixty-five days, which would be non-deterministic for leap years, which have three hundred and sixty-six days. E.g., Spec. ¶ 4.

Appellants that the Examiner relies upon mere speculation or impermissible hindsight, which arguments we find to be unsupported by the record.

Accordingly, we find TimeAndDate teaches or suggests creating a new data type (a second URL) that combines the duration expression (e.g., 35 years) or a new duration expression with an attribute that represents the start datetime or a new start datetime (e.g., first calculated date) based on the precise temporal length in accordance with the claim language. TimeAndDate 1–4; *see also KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) ("[T]he [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ."); *In re Preda*, 401 F.2d 825, 826 (CCPA 1968) ("[I]t is proper to take into account not only specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.").

(2) Parsing the provided data type

Appellants argue the combination of TimeAndDate and TimeMath, and TimeMath in particular, fails to teach or suggest "parsing the provided data type to evaluate the indeterminate duration component in the duration expression comprises adding a value associated with the indeterminate duration component to the start datetime to yield an end datetime," as recited in claim 3, and similarly recited in claims 13 and 23. App. Br. 14; Reply Br. 7–8. Specifically, Appellants argue TimeAndDate fails to teach "parsing the provided data type," and, thus, also fails to teach the disputed limitation. App. Br. 14.

The Examiner finds, and we agree, the combination of TimeAndDate and TimeMath teaches or suggests the disputed limitation. Ans. 6; Non-

Final Act. 5. As to TimeMath, the Examiner finds, and we agree, it teaches or suggests "parsing an input string to determine the start date time and duration expression parameters that can then be evaluated to calculate the resulting time." Ans. 5; Non-Final Act. 5 (citing TimeMath 2 (teaching parsing a command line for such data)). As to TimeAndDate, the Examiner finds, and we agree, it teaches or suggests "the duration component is added to the start datetime to yield an end datetime." Ans. 6 (citing TimeAndDate 2). The Examiner thus finds, and we agree, the combination "provides a parsing means that is capable of extracting the necessary parameters from the input URL string and a reliable means of generating the resulting time and dates that are shown on the TimeAndDate website." Ans. 5.

(3) Start Datetime

Appellants argue the combination of TimeAndDate and TimeMath fails to teach limitations of claim 6, as well as of claims 16 and 26, which Appellants assert have similar limitations. App. Br. 14–16; Reply Br. 8–10. Claim 6 recites:

> converting the start datetime into a client-local start time based on a local time zone associated with the computing device; and
>
> dividing the additional string that represents the start datetime into a first string that represents a start date associated with the start datetime, a second string that represents the client-local start time, and a third string that represents the local time zone, wherein the divided additional string comprises additional separator characters to distinguish the start date, the client-local start time, and the local time zone.

App. Br. 21.

(i) Different embodiments of TimeAndDate

As to "start datetime" and "the additional string that represents the start datetime," Appellants argue the Examiner improperly relies on different portions from different embodiments of TimeAndDate, as well as combining these different portions without providing evidence or reasoning as to how the embodiments are related. App. Br. 14–15 (citing Non-Final Act. 6–7 (arguing the Examiner cites to page 2 and 5 of TimeAndDate which are two different embodiments)); Reply Br. 8.

The Examiner finds the combined teachings of TimeAndDate's Time/Date calculation embodiment and Timezone embodiment teach or suggest "allow[ing] a user to enter a single starting time/date and duration and desired timezone and have [one] calculator generate the ending time/date in the identified timezone." Ans. 7 (citing TimeAndDate 1, 5); *see also* Non-Final Act. 7. The Examiner concludes it would have been obvious to one of ordinary skill in the art to combine existing features of TimeAndDate's calculators into a unified calculator, which "would provide a more stream-line interface to the end user by requiring them to only enter a single string instead of the current implementation that would require the user to access and enter two different inputs between two different calculators" and "is simply a matter of combining already existing functionality to obtain the expected results." Non-Final Act. 7; Ans. 7.

We agree with the Examiner's findings and adopt them as our own. For example, we agree that the claimed features are existing features in different calculator embodiments in the TimeAndDate website. *See* TimeAndDate 1, 5. We also conclude it would have been obvious to one of ordinary skill in the art to combine existing features of TimeAndDate's calculators into a unified calculator, including for the reasons provided by

the Examiner. *See KSR*, 550 U.S. at 417 ("If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability."); *id.* ("[W]hen a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious.") (citations omitted).

(ii) Converting the start datetime

As to "converting the start datetime," Appellants argue TimeAndDate's (i) "Today" interface is merely a utility to obtain the current date and (ii) "Specify time" link is merely an interface to specify a time, and they fail to teach or suggest "converting . . . a start datetime . . . into a client-local start time based on a local time zone associated with the computing device." App. Br. 15 (citing TimeAndDate 2); Reply Br. 9 (citing TimeAndDate 1). Appellants also argue that the cited TimeAndDate source code functions, "getDate and getMonth[,] are standard Javascript methods to extract respectively the day of the month number and the month number respectively from a parameter." Reply Br. 9.

The Examiner finds TimeAndDate teaches or suggests the disputed limitation. Ans. 7; Non-Final Act. 7. The Examiner finds TimeAndDate teaches or suggests obtaining the current local time from the local computing device via the user clicking the "Today" button. Ans. 7 (citing TimeAndDate 1, 6 (providing source code showing the settoday function as obtaining the day, month, and year values from the local system via javascript functions). The Examiner also finds TimeAndDate teaches allowing a user to specify the time, which at least suggests "that the system obtains the current day and time from the client device when the user clicks to populate." *Id.* at 7–8 (citing TimeAndDate 1, 6).

Furthermore, the Examiner finds TimeAndDate allows a user to input desired timezones (e.g., New York, Islamabad) to display the conversion of local times across the timezones. *Id.* at 8 (citing TimeAndDate 5). The Examiner also finds the claim language — "converting the start datetime into a client-local start time based on a local time zone associated with the computing device" — covers "timezone information that is entered by the user, via the computing device [which] is clearly the local timezone associated with the computing device." *Id.*

We agree with the Examiner's findings and adopt them as our own. In particular, we agree the "Today" button and "Specify time" link teach, or at least suggest, that the system obtains the client-local time from the user (i.e., a client-local start time based on a local time zone associated with the computing device). TimeAndDate 1, 6. We also agree TimeAndDate's "World Clock - Time Zone Converter - results" teaches or suggests converting times for different timezones, including converting into the client-local time. *See* TimeAndDate 6 ("At the specified time, local time in Islamabad was 9 hours ahead of New York."); *id.* (providing time conversion between New York and Islamabad). We also find, as above, TimeAndDate teaches providing a start datetime. *See* TimeAndDate 1. Accordingly, we find that the combination teaches, or at least suggests, the disputed limitation.

(iii) Dividing the additional string

As to "dividing the additional string that represents the start datetime" into strings, Appellants argue TimeAndDate's teaching of "&hour=23&min=30&second=0" fails to teach or suggest the client-local start time for the second string, and instead, is the time provided for New York. App. Br. 15; Reply Br. 9. Appellants also argue TimeAndDate fails

to teach a third string corresponding to the local time zone — there is no indication as to how the "&p1 =179" URL portion relates to the local time zone. App. Br. 16.

The Examiner finds the combination, and TimeAndDate in particular, teaches or suggests the disputed limitation. Non-Final Act. 7. Specifically, the Examiner finds TimeAndDate's World Clock - Time Zone converter teaches or suggests the client-local start time and time zone by the variables passed in URL (i.e., "&hour=23&min=30&second=0," which represents the local start time of 11:30:32 PM and "&p1 =179," which represents the local time zone). *Id.* (citing TimeAndDate 5).

We agree with the Examiner that TimeAndDate teaches, or at least suggests, the disputed limitation. In particular, we agree TimeAndDate teaches or suggests dividing the additional start datetime string (e.g., URL) into a local start time and local time zone. *See, e.g.*, TimeAndDate 1, 5. We find Appellants' argument that the parsed time string represents New York rather than the client local time unpersuasive. As we find above, the "Today" button and "Specify time" link teach, or at least suggest, that the system can obtain the client-local time from the user. TimeAndDate 1, 6. Furthermore, the World Clock - Time Zone Converter results page reflects that a user can select various locations, such as their local time, as well as teaching finding suitable meeting times for multiple time zones, which at least suggests a client-local time is included. TimeAndDate 1, 6. The World Clock - Time Zone Converter results page also teaches tracking local time zone information (e.g., UTC-4 hours EDT), which at least suggests that the local time zone also is provided in the URL with its corresponding time. *See id.*

(4) Absolute value operator

Appellants argue the combination of TimeAndDate and TimeMath fails to teach or suggest "creating the new data type . . . using an absolute value operator, the absolute value operator comprising subtracting a value associated with the indeterminate duration component from the start datetime to yield an end datetime, wherein the yielded end datetime is the new start datetime of the new data type," as recited in claim 8, and similarly recited in claims 18 and 28. App. Br. 16–17; Reply Br. 10–11. Specifically, Appellants argue TimeAndDate instead teaches "a normalized version of a to-be-subtracted time, and relates to an example of subtracting a certain time value from a certain date." App. Br. 17 (citing TimeAndDate 3).

The Examiner finds, and we agree, TimeAndDate teaches or suggests the disputed limitation. *See* Ans. 8–9; Non-Final Act. 8. Specifically, the Examiner finds, and we agree, TimeAndDate teaches, for example, subtracting 20 months (i.e., a value associated with the indeterminate duration component; a month can have 28, 29, 30, or 31 days) from May 6, 2006 (i.e., start datetime) to yield September 6, 2004 (i.e., end datetime). Ans. 9 (citing TimeAndDate 3). In accordance with the findings above, the Examiner finds, and we agree, TimeAndDate teaches or suggests making a new calculation with the calculated September 6, 2004 date as the new start datetime in a second URL. *See* Ans. 9 (citing TimeAndDate 3 ("New calculation with Monday, September 6, 2004 as starting point")); *see also* TimeAndDate 1–2 (teaching the input data and corresponding URL results format). Accordingly, we sustain the Examiner's rejection.

(5) Assuming the start datetime

Appellants argue the combination of TimeAndDate and Time Math fails to teach or suggest "assuming the start datetime based on a

configuration associated with the computing device," as recited in claim 37, and similarly recited in claims 38 and 39. App. Br. 17–18. Specifically, Appellants argue TimeAndDate teaches providing a code for the "settoday" function, which does not teach being based on the configuration of the computing device. App. Br. 17.

The Examiner finds, and we agree, TimeAndDate teaches, or at least suggests, the disputed limitation. *See* Ans. 9; Non-Final Act. 20. The Examiner finds the "settoday" function in the website's source code "is executed on the client machine to generate and display the website to the user. As such, the function set today . . . is a configuration of the computing device as it is the code that is used to perform the function." Ans. 9 (citing TimeAndDate 6); *see also* Non-Final Act. 20 (citing TimeAndDate 1; 6, ll. 18–29) (finding when the user clicks the "Today" button, the settoday java function gets the day, month, and year values from the local machine using HTML Java script functions).

(6) Not limited to non-transitory embodiments

Appellants contend claim 11, and claims 12, 13, 15–20, 32, and 38 which depend therefrom, are directed to statutory subject matter, contrary to the Examiner's conclusion. *See* Reply Br. 2–3. Appellants argue the Specification distinguishes between (i) machine-readable *transmission* media and (ii) machine-readable *storage* medium. *See id.* (citing Spec. ¶40). Appellants also argue because claim 11 recites "computer readable medium *storing* computer executable instructions," one of ordinary skill in the art would understand that claim 11 is directed to machine-readable *storage* medium, which "stores instructions in a non-transitory tangible component, e.g., read only memory, magnetic disk storage media, etc." Reply Br. 3.

The Examiner finds "Claim 11 is not limited to non-transitory embodiments." Ans. 2. Specifically, the Examiner finds, in light of the Specification, "computer readable medium is not limited to non-transitory embodiments, instead it has been defined/exemplified as including both non-transitory embodiments . . . and transitory embodiments." Ans. 2 (citing Spec. ¶ 40).

We find Appellants' arguments unpersuasive and we agree with the Examiner's findings. The recited "computer readable medium" is not claimed as non-transitory, and the Specification does not expressly and unambiguously disclaim transitory forms via a definition. *See* Spec. ¶40 (providing that machine readable storage medium "**may include**" certain devices, as well as using additional open-ended language "and others" to describe storage medium) (emphasis added); *see also Ex parte Mewherter*, 107 USPQ2d 1857, 1862 (PTAB 2013) (precedential) ("[T]hose of ordinary skill in the art would understand the claim term 'machine-readable storage medium' would include signals *per se*.").

Accordingly, the "computer readable medium storing computer executable instructions" of claim 11 is not limited to non-transitory forms and is non-statutory subject matter. *Mewherter*, 107 USPQ2d at 1862. We thus sustain this rejection.

CONCLUSION

Based on our above findings above, we sustain the Examiner's § 103 rejection of claims 1, 3, 6, 8, 11, 13, 16, 18, 21, 23, 26, 28, and 34–39. We also sustain the Examiner's rejections of claims 2, 5, 7, 9, 10, 12, 15, 17, 19, 20, 22, 25, 27, 29, and 30, for which Appellants separately did not provide substantive arguments for patentability. We also sustain the Examiner's

§ 103 rejection of claims 31–33 based on our reasoning above, as Appellants largely rely on their arguments as to claims 1, 11, and 21, and also argue Biron fails to cure the alleged deficiencies. App. Br. 18–19. We also sustain the Examiner's § 101 rejection of claim 11, as well as claims 12, 13, 15–20, 32, and 38 which depend therefrom.

DECISION

We affirm the Examiner's decision rejecting claims 1–3, 5–13, 15–23, and 25–39.

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