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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/010,347	11/21/2008	5787449	6620-81781-01	3627

26111 7590 08/21/2009

EXAMINER	
ART UNIT	PAPER NUMBER

Richard D. McLeod
Klarquist Sparkman LLP
121 SW Salmon Street, #1600
Portland, OR 97204

DATE MAILED: 08/21/2009

Please find below and/or attached an Office communication concerning this application or proceeding.

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STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
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STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON DC 20005

(For Patent Owner)

MAILED

AUG 2 1 2009

CENTRAL REEXAMINATION UNIT

Richard D McLeod
Klarquist Sparkman LLP
121 SW Salmon St. #1600
Portland OR 97204

(For Third Party Requester)

In re: Vulpe *et alia*
Ex Parte Reexamination Proceeding
Control No. 90/010,347
Deposited: 21 November 2009
For: US Patent No. 5,787,449

DECISION
DISMISSING
PETITION FOR EXTENSION
OF TIME
37 CFR § 1.550(c) & 1.181

This is a decision on the 19August 2009, "Petition for Extension of Time to File Response to First Office Action Pursuant to 37 CFR § 1.550(c)" requesting that the time for responding to the Office action dated 15 June 2009, be further extended. The petition was timely filed with the petition fee.

The petition is before the Director of the Central Reexamination Unit for consideration.

The petition is dismissed for the reasons set forth below.

DISCUSSION

The Patent Owner requests the period of time be extended in which to extend the response period for the Office action dated 15 June 2009, be extended for a second month. The patent owner's petition for extension of time was timely filed on 19 August 2009, together with the proper fee as required by 37 CFR § 1.17 (g).

37 CFR § 1.550 (c) states:

> (c) The time for taking any action by a patent owner in an *ex parte* reexamination proceeding will be extended only for sufficient cause and for a reasonable time specified. Any request for such extension must be filed on or before the day on which action by the patent owner is due, but in no case will the mere filing of a request effect any extension. Any request for such extension must be accompanied by the petition fee set forth in § 1.17(g). See § 1.304(a) for extensions of time for filing a

> notice of appeal to the U.S. Court of Appeals for the Federal Circuit or for commencing a civil action.

Addressing the requirement of 37 CFR § 1.550 (c) to make a showing of "sufficient cause" to grant an extension of time request, MPEP 2265 states, in pertinent part:

> Evaluation of whether sufficient cause has been shown for an extension must be made in the context of providing the patent owner with a fair opportunity to present an argument against any attack on the patent, and the requirement of the statute (35 U.S.C. § 305) that the proceedings be conducted with special dispatch. ...
>
> Any request for an extension of time in a reexamination proceeding must fully state the reasons therefor. The reasons must include (A) a statement of what action the patent owner has taken to provide a response, to date as of the date the request for extension is submitted, and (B) why, in spite of the action taken thus far, the requested additional time is needed. The statement of (A) must provide a factual accounting of reasonably diligent behavior by all those responsible for preparing a response to the outstanding Office action within the statutory time period. All requests must be submitted in a separate paper which will be forwarded to the CRU or TC Director for action. ...
>
> First requests for extensions of these statutory time periods will be granted for sufficient cause, and for a reasonable time specified — usually 1 month. The reasons stated in the request will be evaluated by the CRU or TC Director, and the requests will be favorably considered where there is a factual accounting of reasonably diligent behavior by all those responsible for preparing a response within the statutory time period. Second or subsequent requests for extensions of time or requests for more than 1 month will be granted only in **extraordinary** situations. (emphasis added) ...

ANALYSIS AND FINDINGS

The patent owner's petition seeks to further extend the period for which to respond, is before the Director of the CRU. The decision to extend the period for response is evaluated based upon a showing of "sufficient cause." There is always the consideration to balance the need for the patent owner to have a fair opportunity to respond to the Office action between the need for special dispatch.

It is noted that a first extension of one-month time has already been granted. Pursuant to MPEP § 2265 Second or subsequent requests for extensions of time or requests for more than 1 month will be granted only in extraordinary situations. It is not clear what is extraordinary in this petition to support "sufficient cause" for a second and subsequent extension of time. It is unclear how the i4i team schedule over the next two weeks is extraordinary when the time for response is three months. It is unclear what action the patent owner has taken to provide a response, to date as of the date the request for extension is submitted, and why, in spite of the action taken thus far, the requested additional time is needed. It is unclear what scheduling conflicts there were since the mailing of the Office action.

The petition request to extend the response time by one (1) month is hereby dismissed.

CONCLUSION

1. The patent owner's petition for further extending the period for response is hereby **dismissed.**

2. The period for response ends on 15 September 2009.

3. Correspondence to the Office should be addressed as follows:

By Mail to: Mail Stop *Ex Parte* Reexam
Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office
P. O. Box 1450
Alexandria, VA 22313-1450

By Fax to: (571) 273-9900
Central Reexamination Unit

By Hand: Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

By EFS: Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html. EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.

3. Telephone inquiries with regard to this decision should be directed to Mark Reinhart, at (571) 272-1611, in the event that Mark Reinhart is unavailable Eric Keasel at (571) 272-4929, or Jessica Harrison at (571) 272-4449; all are Supervisory Patent Examiners in the Central Reexamination Unit, Art Unit 3992 may also be contacted..

/Mark Reinhart/
for

Gregory Morse
Director,
Central Reexamination Unit 3999

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/010,347	11/21/2008	5787449	6620-81781-01	3627

26111 7590 07/23/2009

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 07/23/2009

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UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patents and Trademark Office
P.O.Box 1450
Alexandria, VA 22313-1450
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THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS
RICHARD D. McLEOD
KLARQUIST SPARKMAN LLP
121 SW SALMON STREET, #1600
PORTLAND, OR 97204

Date:
MAILED
JUL 23 2009
CENTRAL REEXAMINATION UNIT

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. : 90010347
PATENT NO. : 5787449
ART UNIT : 3992

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified ex parte reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the ex parte reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
P.O. Box 1450
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www.uspto.gov

STERNE, KESSLER, GOLDSTEIN & FOX LLC
1100 NEW YORK AVENUE, NW
WASHINGTON DC 20005

(For Patent Owner)

RICHARD D. MCLEOD
KLARKQUIST SPARKMAN LLP
121 SW SALMON STREET #1600
PORTLAND, OR 97204

(For Third-Party Requester)

In re VULPE et al.
Reexamination Proceeding
Control No. 90/010,347
Request Deposited: November 21, 2008
For: U.S. Patent No. 5,787,449

: DECISION ON
: PETITION FOR
: EXTENSTION OF TIME
: [37 CFR 1.550(c)]
:

This is a decision on the July 17, 2009, "REQUEST FOR EXTENSION OF TIME PURSUANT TO 37 C.F.R §1.550(c)" requesting that the time to respond to the outstanding Office action be extended two months.

The petition is before the Director of the Central Reexamination Unit for consideration.

The petition is **granted-in-part** and a one-month extension of time is granted for the reasons set forth below.

REVIEW OF RELEVANT FACTS

1. U.S. Patent No. 5,787,449 (hereinafter, the '449 patent), issued to VULPE et al on July 28, 1998.

2. On November 21, 2008, a third party deposited a Request for *Ex Parte* Reexamination of the '449 patent. The reexamination proceeding was assigned Control No. 90/010,347(hereinafter, the '10347 proceeding).

3. The reexamination order was granted in the '10347 proceeding on January 23, 2009.

DECISION

The Patent Owner requests a two (2) month extension of time in which to file a response to the outstanding office action. The request for extension is the first request for an extension of time. The present petition for extension of time was timely filed on July 17, 2009, together with the petition fee required by 37 CFR 1.515(c).

37 CFR 1.550 (c) states:

(c) The time for taking any action by a patent owner in an ex parte reexamination proceeding will be extended only for sufficient cause and for a reasonable time specified. Any request for such extension must be filed on or before the day on which action by the patent owner is due, but in no case will the mere filing of a request effect any extension. Any request for such extension must be accompanied by the petition fee set forth in § 1.17(g). See § 1.304(a) for extensions of time for filing a notice of appeal to the U.S. Court of Appeals for the Federal Circuit or for commencing a civil action.

Addressing the requirement of 37 CFR 1.550 (c) to make a showing of' "sufficient cause" to grant an extension of time request, MPEP 2265 states, in pertinent part:

Evaluation of whether sufficient cause has been shown for an extension must be made in the context of providing the patent owner with a fair opportunity to present an argument against any attack on the patent, and the requirement of the statute (35 U.S.C. 305) that the proceedings be conducted with special dispatch ....

Any request for an extension of time in a reexamination proceeding must fully state the reasons therefor ....

The reasons stated in the request will be evaluated by the CRU Director, and the requests will be favorably considered where there is a factual accounting of reasonably diligent behavior by all those responsible for preparing a response within the statutory time period.

Patent Owner's Showing of Sufficient Cause to Grant an Extension of Time

The request notes that the office action was mailed by the Office on June 15, 2009 and present counsel was not retained until July 15, 2009. One month of the response period had lapsed when counsel was retained. Petitioner requests an additional two months for preparation of the response. Reference is made to the petition for details of this and other issues.

Analysis and Findings

On balance it is considered that the petition explains the "sufficient cause" for an extension of time. It is clear Patent Owner requires some additional time to prepare a Patent Owner statement. However, as noted in MPEP 2265, second or subsequent requests for extensions of time or *requests for more than 1 month* will be granted only in extraordinary situations. The instant facts do not appear extraordinary. An extension of time of one month is considered sufficient.

Accordingly, the time for filing a Patent Owner statement is extended for one month and is due on or before September 15, 2009.

Patent Owner should expect that future requests for extensions will not be granted absent strong and compelling reasons that establish the existence of an extraordinary situation necessitating the additional time.

CONCLUSION

1. Petitioner's request is **granted-in-part**. The period during which Patent Owner may file a Patent Owner statement has been extended to November 20, 2008.

2. All correspondence relating to this *ex parte* reexamination proceeding should be directed:

By EFS: Registered users may submit via the electronic filing system EFS-Web, at **https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html**.

By Mail to: Mail Stop *Ex Parte* Reexam
Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand: Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

For EFS-Web transmissions, 37 CFR 1.8(a)(1)(i) (C) and (ii) states that correspondence (except for a request for reexamination and a corrected or replacement request for reexamination) will be considered timely filed if (a) it is transmitted via the Office's electronic filing system in accordance with 37 CFR 1.6(a)(4), and (b) includes a certificate of transmission

for each piece of correspondence stating the date of transmission, which is prior to the expiration of the set period of time in the Office action.

3. Telephone inquiries related to this decision should be directed to Jessica Harrison at (571) 272-4449, Eric Keasel at (571) 272-4929, or Mark Reinhart at (571) 272-1611.

/J. Harrison/ for

Gregory Morse
Director, Central Reexamination Unit

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UNITED STATES DEPARTMENT OF COMMERCE
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Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/010,347	11/21/2008	5787449	6620-81781-01	3627

7590 06/15/2009

CUSHMAN, DARBY & CUSHMAN
1100 NEW YORK AVENUE, NW
NINTH FLOOR
WASHINGTON, DC 20005-3918

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 06/15/2009

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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

Richard D. McLeod
Klarquist Sparkman LLP
121 SW Salmon Street, #1600
Portland, OR 97204

MAILED

JUN 15 2009

CENTRAL REEXAMINATION UNIT

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/010,347*.

PATENT NO. *5787449*.

ART UNIT *3992*.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	Control No. 90/010,347	Patent Under Reexamination 5787449	
	Examiner ALEXANDER J. KOSOWSKI	Art Unit 3992	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

a☒ Responsive to the communication(s) filed on *21 November 2008* . b☐ This action is made FINAL.
c☐ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).** If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☒ Information Disclosure Statement, PTO/SB/08.
3. ☐ Interview Summary, PTO-474.
4. ☐ ___.

Part II SUMMARY OF ACTION

1a. ☒ Claims *14-20* are subject to reexamination.
1b. ☒ Claims *1-13* are not subject to reexamination.
2. ☐ Claims ___ have been canceled in the present reexamination proceeding.
3. ☐ Claims ___ are patentable and/or confirmed.
4. ☒ Claims *14-20* are rejected.
5. ☐ Claims ___ are objected to.
6. ☐ The drawings, filed on ___ are acceptable.
7. ☐ The proposed drawing correction, filed on ___ has been (7a) ☐ approved (7b)☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All b)☐ Some* c)☐ None of the certified copies have
   1☐ been received.
   2☐ not been received.
   3☐ been filed in Application No. ___.
   4☐ been filed in reexamination Control No. ___.
   5☐ been received by the International Bureau in PCT application No. ___.
   * See the attached detailed Office action for a list of the certified copies not received.
9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.
10. ☐ Other: ____

cc: Requester (if third party requester)

DETAILED ACTION

1) This Office action addresses claims 14-20 of United States Patent Number 5,787,449 (Vulpe et al), for which it has been determined in the Order Granting Ex Parte Reexamination (hereafter the "Order") mailed 1/23/09 that a substantial new question of patentability was raised in the Request for *Ex Parte* reexamination filed on 11/21/08 (hereafter the "Request"). Claims 14-20 are subject to reexamination. Claims 1-13 are not subject to reexamination. This is a non-final action.

References Utilized

U.S. Pat 6,101,512 (DeRose)

Canadian Patent Document 2,048,039 (DeRose2)

"Rita-an editor and user interface..." (Cowan)

Claim Rejections - 35 USC § 102

2) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3) Claims 14-15 and 20 are rejected under 35 U.S.C. 102(e) as being unpatentable by DeRose.

Referring to claim 14, DeRose teaches a method for producing a first map of metacodes and their addresses of use in association with mapped content and stored in distinct map storage means (col. 9 lines 22-39, col. 10 lines 50-59 and Figure 6, whereby metacode maps are associated with mapped content and stored in separate files), the method comprising:

providing the mapped content to mapped content storage means (col. 10 lines 50-59 and col. 12 lines 45-50, whereby a mass storage device contains multiple files);

providing a menu of metacodes (col. 8 lines 27-61, col. 15 lines 15-28, and Figure 6, whereby SGML documents can be parsed and metacodes listed out); and

compiling a map of the metacodes in the distinct storage means, by locating, detecting and addressing the metacodes (col. 10 line 41 through col. 12 line 54 and Figures 6 and 8, whereby a map construction process is taught which parses an SGML document and creates element maps); and

providing the document as the content of the document and the metacode map of the document (col. 10 lines 50-59, col. 12 lines 45-65 and col. 17 lines 50-60, whereby after parsing the resulting element directory and mapped content can be used to render the document in a variety of formats, and can be stored as separate files containing element directory and text content).

Referring to claim 15, DeRose teaches a method as claimed in claim 14 further comprising:

detecting and locating a multiplicity of metacodes constituting the menu in a document (col. 8 lines 27-61, whereby SGML documents can be parsed);

storing the multiplicity of metacodes, in whole or in part, in the distinct storage means (col. 10 lines 50-59, whereby an element directory is stored);

detecting and locating mapped content in the document (col. 10 lines 41-65 and Figures 6 and 8, whereby text content is detected and located);

and storing the mapped content, in whole or in part, in the mapped content storage means (col. 10 lines 50-59 and col. 12 lines 45-50 and Figure 8, whereby text content of a document is stored in a storage device).

Referring to claim 20, DeRose teaches a method for producing from a document made up of metacodes and content, a map of metacodes and their addresses of use in association with mapped content of the document and stored in distinct map storage means (col. 10 lines 50-65 and Figure 8), the method comprising:

(a) reading the content of the document until a metacode is found (Figure 8 and col. 10 lines 40-59, whereby new elements are set up once tags are found);

(b) copying the content and storing the copied content in a mapped content storage (Col. 10 lines 50-59 and col. 12 lines 45-50, whereby mapped content is stored in storage means);

(c) noting in the map the found metacode and its position in the content (col. 11 lines 10-19 and Figures 6 and 8, whereby locations of elements within content are recorded);

(d) repeating the processing of (a)-(c) until the entire document has been processed (col. 9 lines 53-62 and Figure 8, whereby the entire document is parsed); and then

(e) providing the document as the content of the document separately from the metacode map of the document (Col. 10 lines 50-59 and Col. 12 line 54 through col. 13 line 5, whereby the stored element directory is separated from the stored mapped content).

Claim Rejections – 35 USC § 103

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if 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. Patentability shall not be negatived by the manner in which the invention was made.

5) Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeRose, further in view of Cowan.

Referring to claims 16-19, DeRose teaches the above. In addition, DeRose teaches (Claim 17) wherein the metacode is a description code (col. 3 lines 26-32 and col. 7 line 60 through col. 8 line 5 and Figure 4, whereby SGML tags are descriptive) and (Claim 19) applying the first map to the mapped content to provide a differentiated document (Figures 12-14 and col. 24 lines 40-46, whereby different style sheets can generate different views and structures of the same content, and whereby annotations can be combined with the structure document).

However, DeRose does not explicitly teach (Claim 16) amending the multiplicity of the metacodes to produce a second map or (Claim 18) comparing the multiplicity of metacodes in the map with a predetermined set of criteria.

Cowan teaches an interface for manipulating structured documents that amends metacodes in a map to produce a second map (Page 131, whereby a transform function can be used to change metacodes from one type to another) and compares the multiplicity of metacodes in the map with a predetermined set of criteria (Page 140, whereby Cowan teaches a validation routine that can check document structure and metacode mapping against SGML grammar and formatting).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize the limitations of Cowan in the method taught by DeRose since both DeRose and Cowan describe systems and methods for decomposing SGML-encoded documents into metacode maps and mapped contents, each of which is then stored in separate storage areas, and since both DeRose and Cowan teach editing both content and metacode maps after a document has been parsed.

Alternate Rejection #1 of Claims 14-20

Claim Rejections - 35 USC § 102

6) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7) Claims 14-20 are rejected under 35 U.S.C. 102(b) as being unpatentable by Cowan.

Referring to claim 14, Cowan teaches a method for producing a first map of metacodes and their addresses of use in association with mapped content and stored in distinct map storage means (Pages 133-134, whereby tree lists and line lists are parsed from SGML documents and stored separately), the method comprising:

providing the mapped content to mapped content storage means (Pages 133-134, whereby document text is mapped as line lists and stored in memory);

providing a menu of metacodes (Page 133, whereby SGML documents contain metacodes to be parsed, and Page 127, whereby an interface of valid tags is established); and

compiling a map of the metacodes in the distinct storage means, by locating, detecting and addressing the metacodes (Pages 133-134, whereby files can be imported into Rita by being parsed into tree lists, field lists and line lists created and stored in memory); and

providing the document as the content of the document and the metacode map of the document (Page 133 and Figure 4, Page 131, whereby a user interface includes a left hand pane for displaying a metacode map that may be edited separately from the text content, which is in a right hand pane, and whereby the document is stored to hard disk after editing as an SGML embedded file).

Referring to claim 15, Cowan teaches a method as claimed in claim 14 further comprising:

detecting and locating a multiplicity of metacodes constituting the menu in a document (Pages 133-134, whereby documents are parsed to separate metacodes from text content);

storing the multiplicity of metacodes, in whole or in part, in the distinct storage means (Pages 131 and 134, whereby the split structured documents are stored in separate memory, including tree lists);

detecting and locating mapped content in the document (Pages 131 and 134, whereby mapped content is placed in the line list data structure);

and storing the mapped content, in whole or in part, in the mapped content storage means (Page 134, whereby line lists are stored in distinct memory).

Referring to claim 16, Cowan teaches amending metacodes in a map to produce a second map (Page 131, whereby a transform function can be used to change metacodes from one type to another)

Referring to claim 17, Cowan teaches wherein metacode is a description code (Page 130, whereby it is taught that SGML tags indicate descriptions of structure).

Referring to claim 18, Cowan teaches comparing the multiplicity of metacodes in the map with a predetermined set of criteria (Page 140, whereby Cowan teaches a validation routine that can check document structure and metacode mapping against SGML grammar and formatting).

Referring to claim 19, Cowan teaches applying the first map to the mapped content to provide a differentiated document (Page 133, whereby documents which have been parsed and

edited are wished to be saved they are written to a hard disk as flat, ASCII files with SGML tags embedded in the content).

Referring to claim 20, Cowan teaches a method for producing from a document made up of metacodes and content, a map of metacodes and their addresses of use in association with mapped content of the document and stored in distinct map storage means (Pages 133-134, whereby tree lists and line lists are parsed from SGML documents and stored separately), the method comprising:

(a) reading the content of the document until a metacode is found (Page 133, whereby SGML documents are parsed while imported into Rita);

(b) copying the content and storing the copied content in a mapped content storage (Pages 133-134 and Figure 4, whereby text content is copied into the line list data structure);

(c) noting in the map the found metacode and its position in the content (Pages 133-134, whereby metacode tags are written into the tree list and the tags are mapped to the text content in the line list using the field list data structure);

(d) repeating the processing of (a)-(c) until the entire document has been processed (Page 133, whereby when a complete file is being read, Rita acts in a manner similar to a batch compiler or document formatter, and therefore the entire document will be processed); and then

(e) providing the document as the content of the document separately from the metacode map of the document (Figure 4 and Page 131, whereby the document is provided as content separated from metacode map in separate windows).

Alternate Rejection #2 of Claims 14-20

8) This rejection utilizes a Canadian Patent document which provides an almost identical disclosure to U.S. Pat 6,101,512 to DeRose utilized above. However, this document is utilized as a 102(b) rejection.

Claim Rejections - 35 USC § 102

9) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10) Claims 14-20 are rejected under 35 U.S.C. 102(b) as being unpatentable by DeRose2.

Referring to claim 14, DeRose2 teaches a method for producing a first map of metacodes and their addresses of use in association with mapped content and stored in distinct map storage means (Pages 22 and 25 and Figure 6, whereby metacode maps are associated with mapped content and stored in separate files), the method comprising:

providing the mapped content to mapped content storage means (Page 25 and Page 30, whereby a mass storage device contains multiple files);

providing a menu of metacodes (Pages 19-20, Pages 36-37, and Figure 6, whereby SGML documents can be parsed and metacodes listed out); and

compiling a map of the metacodes in the distinct storage means, by locating, detecting and addressing the metacodes (Pages 22-30 and Figures 6 and 8, whereby a map construction process is taught which parses an SGML document and creates element maps); and

providing the document as the content of the document and the metacode map of the document (Page 25, Page 30 and Page 43, whereby after parsing the resulting element directory and mapped content can be used to render the document in a variety of formats, and can be stored as separate files containing element directory and text content).

Referring to claim 15, DeRose2 teaches a method as claimed in claim 14 further comprising:

detecting and locating a multiplicity of metacodes constituting the menu in a document (Pages 19-20, whereby SGML documents can be parsed);

storing the multiplicity of metacodes, in whole or in part, in the distinct storage means (Page 25, whereby an element directory is stored);

detecting and locating mapped content in the document (Pages 25-26 and Figures 6 and 8, whereby text content is detected and located);

and storing the mapped content, in whole or in part, in the mapped content storage means (Page 25 and Page 30 and Figure 8, whereby text content of a document is stored in a storage device).

Referring to claim 20, DeRose2 teaches a method for producing from a document made up of metacodes and content, a map of metacodes and their addresses of use in association with mapped content of the document and stored in distinct map storage means (Page 25 and Figure 8), the method comprising:

(a) reading the content of the document until a metacode is found (Figure 8 and Page 25, whereby new elements are set up once tags are found);

(b) copying the content and storing the copied content in a mapped content storage (Page 25 and Page 30, whereby mapped content is stored in storage means);

(c) noting in the map the found metacode and its position in the content (Pages 26-27 and Figures 6 and 8, whereby locations of elements within content are recorded);

(d) repeating the processing of (a)-(c) until the entire document has been processed (Page 23 and Figure 8, whereby the entire document is parsed); and then

(e) providing the document as the content of the document separately from the metacode map of the document (Page 25 and Pages 30-31, whereby the stored element directory is separated from the stored mapped content).

Claim Rejections – 35 USC § 103

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if 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. Patentability shall not be negatived by the manner in which the invention was made.

5) Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeRose2, further in view of Cowan.

Referring to claims 16-19, DeRose2 teaches the above. In addition, DeRose2 teaches (Claim 17) wherein the metacode is a description code (Page 6 and Pages 18-19 and Figure 4, whereby SGML tags are descriptive) and (Claim 19) applying the first map to the mapped

content to provide a differentiated document (Figures 12-14 and Pages 60-61, whereby different style sheets can generate different views and structures of the same content, and whereby annotations can be combined with the structure document).

However, DeRose2 does not explicitly teach (Claim 16) amending the multiplicity of the metacodes to produce a second map or (Claim 18) comparing the multiplicity of metacodes in the map with a predetermined set of criteria.

Cowan teaches an interface for manipulating structured documents that amends metacodes in a map to produce a second map (Page 131, whereby a transform function can be used to change metacodes from one type to another) and compares the multiplicity of metacodes in the map with a predetermined set of criteria (Page 140, whereby Cowan teaches a validation routine that can check document structure and metacode mapping against SGML grammar and formatting).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize the limitations of Cowan in the method taught by DeRose2 since both DeRose2 and Cowan describe systems and methods for decomposing SGML-encoded documents into metacode maps and mapped contents, each of which is then stored in separate storage areas, and since both DeRose2 and Cowan teach editing both content and metacode maps after a document has been parsed.

Conclusion

All correspondence relating to this ex parte reexamination proceeding should be directed as follows:

By U.S. Postal Service Mail to:

Mail Stop Ex Parte Reexam
ATTN: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to:

(571) 273-9900
Central Reexamination Unit

By hand to:

Customer Service Window
Randolph Building
401 Dulany St.
Alexandria, VA 22314

By EFS-Web:

Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at

https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html

EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.

14) Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

/Alexander J Kosowski/

Primary Examiner, Art Unit 3992

ESK

FOR

Exhibit 2 to the Request for Ex Parte Re-examination of

In re Patent No: 5,787,449

Issued: July 28, 1998

Filed: June 2, 1994

Applicant: Vulpe, et al.

Title: Method And System For Manipulating The Architecture And The Content Of A Document Separately From Each Other

INFORMATION DISCLOSURE STATEMENT REEXAMINATION PRIOR ART	Attorney Docket Number	6620-81781-01
	Patent Number	5,787,449
	Issued Date	July 28, 1998
	First Named Inventor	Vulpe, et al.

U.S. PATENT DOCUMENTS

Copies of U.S. Patent documents do not need to be provided, unless requested by the Patent and Trademark Office. For patents, provide the patent number and the issue date. For published U.S. applications, provide the publication number and the publication date. For unpublished pending patent applications, provide the application number and the filing date.

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		6,101,512	August 8, 2000	DeRose

Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS
		Cowan, D.D., et al., *Rita – an editor and user interface for manipulating structured documents,* Electronic Publishing, Vol. 4(3), pp. 125-150, published September 1991.

EXAMINER SIGNATURE:	DATE CONSIDERED:

* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent No: 5,787,449 **Issued**: July 28, 1998 **Filed**: June 2, 1994 **Applicant**: Vulpe, et al. **Title**: Method And System For Manipulating The Architecture And Content Of A Document Separately From Each Other	**R.C.N.:** Not yet assigned **Examiner:** Not yet assigned **Art Unit:** Not yet assigned

Request For *Ex Parte* Reexamination

Mail Stop "*Ex Parte* Reexamination"
Office of Patent Legal Affairs
Attn: Central Reexamination Unit
P.O. BOX 1450
Alexandria, VA 22313-1450

TABLE OF CONTENTS

I. INTRODUCTION

Pursuant to 35 U.S.C. §§ 301 *et seq.* (2002), Microsoft Corporation requests reexamination of U.S. Patent No. 5,787,449 (hereinafter "the '449 Patent" or "the Patent").[1] The '449 Patent issued on July 28, 1998 to Vulpe, et al. (hereinafter "Applicants") from an application filed on June 2, 1994 (hereinafter "Application Date"). According to the assignment database of the Patent Office, the Patent is currently assigned to i4i Limited Partnership (hereinafter "Patentee"), located in Ontario, Canada. This is a new reexamination request. The '449 Patent has not been previously reexamined.

Requester respectfully submits that there are substantial new questions regarding the patentability of claims 14-20 of the '449 Patent.[2] These substantial new questions of patentability are based on previously uncited, and thus unconsidered, prior art that renders each of these claims invalid.[3] Accordingly, Requester respectfully asks that this Request for *Ex Parte* Reexamination be granted, and that these claims be cancelled.

The correspondence address for this matter is:

Richard D. Mc Leod
Klarquist Sparkman LLP
121 SW Salmon St., #1600
Portland OR 97204
Phone – 503-595-5300
Fax – 503-595-5301

The fee for this Request for *Ex Parte* Reexamination ($2,520) has been paid by credit card as part of the EFS-WEB submission.

Requester certifies that a complete copy of this request has been served upon the patent owner of record as shown in the certificate of service located at the last page of this request.

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[1] A true and correct copy of the '449 Patent is attached as Exhibit 1, along with any certificates of correction, disclaimer and/or reexamination.

[2] Claims 1-13 have not been made part of this Request in view of the decision by the District Court that those claims are indefinite for failure to comply with 35 U.S.C. § 112, ¶ 2. (*See* Exhibit 6, p. 28.) At this time, this is not a "final decision" within the meaning used by MPEP § 2200 *et seq.*

[3] All of the art cited in this Request against the claims is listed in the form PTO-1449 (or equivalent) attached as Exhibit 2.

The '449 Patent is currently the subject of litigation in the case styled, *i4i Limited Partnership v. Microsoft Corporation, et al.*, No. 6:07-CV-113-LED, which is pending in the United States District Court for the Eastern District of Texas ("the Litigation").

This Request is structured as follows:

- Section II identifies the prior art relied upon in this Request, as well as additional written evidence upon which the Patent Office can rely in evaluating the patentability of the claims.
- Section III identifies the specific substantial new questions of patentability that the Requester has raised in this Request.
- Section IV provides an introduction to the '449 Patent and the prior art and includes a discussion of the claim scope that has been alleged by the patent owner in the Litigation.
- Section V contains the detailed description applying the cited prior art against the claims that are challenged by this Request.

II. IDENTIFICATION OF THE PRIOR ART REFERENCES THAT PRESENT SUBSTANTIAL NEW QUESTIONS OF PATENTABILITY

Reexamination of claims 14-20 of the '449 Patent is requested in view of the following references:

Exhibit 3. United States Patent No. 6,101,512 to DeRose, titled "Data Processing System And Method For Generating A Representation For And Random Access Rendering Of Electronic Documents," issued on August 8, 2000 from an application originally filed on July 19, 1991 (hereinafter "**DeRose**").

Exhibit 4. Cowan, D.D., et al., *Rita – an editor and user interface for manipulating structured documents,* Electronic Publishing, Vol. 4(3), pp. 125-150, published September 1991 (hereinafter "**Cowan**");

Requester also provides the following "other written evidence" that may be considered in determining the patentability of the claims. These documents contain admissions made by the Applicants regarding the scope of the claims in the context of the concurrent Litigation, explain the teaching of the cited prior art, and/or explain the meaning of claim terms to the person of

ordinary skill in the art, including, but not limited to the "common knowledge" of such persons. (*See* Manual of Patent Examination Practice ("MPEP") § 2258).[4]

Exhibit 5. Transcript of *Markman* and Motion Hearing, held in the Litigation on February 28, 2008, (hereinafter "Markman Tr.");

Exhibit 6. Memorandum Opinion and Order; issued in the Litigation by the court, docket no. 111, dated April 10, 2008, (hereinafter "Markman Order");

Exhibit 7. Declaration Of Dr. Thomas S. Payne In Support Of Plaintiff's Opposition To Microsoft's Motion For Partial Summary Judgment Of Invalidity Of Claims 1-13 Of U.S. Patent No. 5,787,449 For Indefiniteness Under 35 U.S.C. §112 ¶ 2; filed by plaintiff in the Litigation on February 22, 2008, docket no. 96-2, (hereinafter "Payne Decl."); and

Exhibit 8. International Standard ISO-8879, Information Processing – Text and Office Systems – Standard Generalized Markup Language (SGML), 1st ed., Ref. No. ISO 8879-1986(E), published by the International Organization of Standardization, October 15, 1986, (hereinafter "SGML Spec.").

Additional support for the Detailed Explanation applying the prior art to the claims is contained in the following claim charts:

Appendix A. Claim Chart – DeRose; and

Appendix B. Claim Chart – Cowan.

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[4] "It is important in this inquiry to distinguish between the references sought to be combined and 'the prior art', as the latter category is much broader. For example, textbooks or treatises may include basic principles unlikely to be restated in cited references." Dystar Textilfarben Gmbh & Co Deutschland KG v. C.H. Patrick Co., et al., 464 F.3d 1356, 1368 (Fed. Cir. 2006).

III. IDENTIFICATION OF THE SUBSTANTIAL NEW QUESTIONS OF PATENTABILITY

The following chart summarizes the substantial new questions of patentability raised by the references cited above. The detailed explanation of the pertinency and application of the references to the claims is presented in Section V.

SNQ #	Question Raised Alone Or In Combination With Other References	Claim Chart
1	Claims 14-20 are invalid as being unpatentable under 35 U.S.C. § 102(e) due to anticipation by DeRose.	Appendix A
2	Claims 14-20 are invalid as being unpatentable under 35 U.S.C. § 102(b) due to anticipation by Cowan.	Appendix B
3	Claims 14-20 are invalid as being unpatentable under 35 U.S.C. § 103(a) over DeRose in view of Cowan.	Appendix A + Appendix B

IV. OVERVIEW OF THE '449 PATENT AND ITS PROSECUTION, ITS CLAIM TERMS AND THE PRIOR ART

In light of the prior art cited herein, the '449 Patent did not describe or claim anything novel or non-obvious. This section introduces the subject matter of the '449 Patent, the original prosecution history, the scope of the claims as alleged by the Patentee, and the prior art.

A. Subject Matter Of The '449 Patent

Prior to the filing of the '449 Patent, the electronic publishing industry had begun using markup languages to create "structured documents." Structured documents could be rendered differently by different devices using the same "markup" of the text content by applying formatting rules from another source (e.g., a "style sheet").

In particular, the Standard Generalized Markup Language ("SGML") defined by ISO-8879 was used for this purpose. ('449 Patent, col. 2, lines 41-54; *also see generally* SGML Spec., attached as Exhibit 8). In SGML, the content is structured using a variety of keywords that are embedded within angled brackets in the text. (*Id.*; *see also* SGML Spec., p. 69, below). The '449 Patent acknowledged the relevance of SGML stating that an "example of metacode language of use in the practice of the invention is SGML." ('449 Patent, col. 4, lines 63-64) (emphasis added).

In a typical SGML file, a metacode generally begins with a "less-than" angle bracket and ends with a "greater-than" bracket. This is the location in the file where the SGML tag (or

"metacode," using the language of the '449 patent) takes effect. Each "start-tag" generally will have a corresponding "end-tag" that marks the end of the effect specified by the start-tag. (*Compare* SGML Spec., p. 69 *and* DeRose, Fig. 4 *with* '449 Patent, col. 2, lines 47-54).

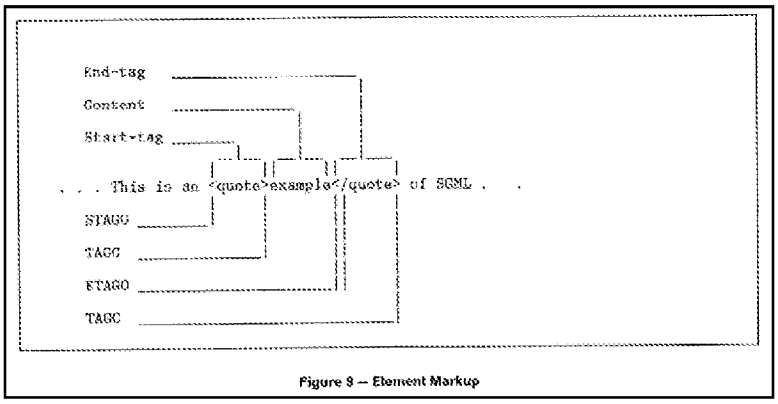


Figure 9 — Element Markup

SGML Spec., p. 69

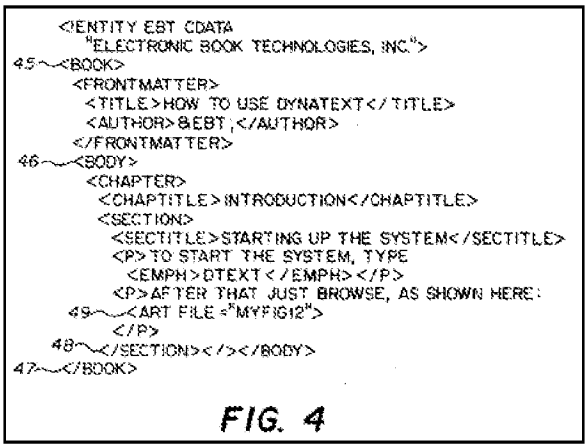


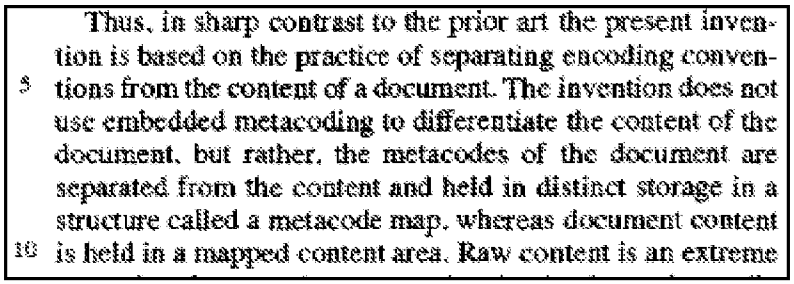
FIG. 4

DeRose, Fig. 4

the content. For example in a stream of characters like this: "the major <kword>industry</kword> in Canada is", the <kword> and </kword> are used to mark the beginning and
50 end of a section of content which is to be treated as a "kword". The meaning of "kword" is up to the interpreter. SGML specifies rules for insertion of tags into the content stream and how tags are to be differentiated from the content.

'449 Patent, col. 2, lines 47-54

In broad strokes, the '449 Patent proposed decomposing a structured document, such as an SGML document, into (at least) two component parts that would separate the document structure (as reflected by the SGML metacodes) from the document content. ('449 Patent, col. 4, lines 3-10, below.)



Thus, in sharp contrast to the prior art the present invention is based on the practice of separating encoding conventions from the content of a document. The invention does not use embedded metacoding to differentiate the content of the document, but rather, the metacodes of the document are separated from the content and held in distinct storage in a structure called a metacode map, whereas document content is held in a mapped content area. Raw content is an extreme

After decomposition, the user could edit the structure map (i.e., metacode map) and the content independently of one another. ('449 Patent, col. 7, lines 6-25.) Finally, after editing was complete, the user could re-integrate the metacode map with the document content to produce a "composite document" (i.e., a flat, SGML-encoded text file). (*Compare* '449 Patent, col. 7, line 66 – col. 8, line 7 *with* Markman Tr., p. 12-13.)

This concept of separating content and structure is critical to the '449 Patent, which states that "[m]ost of the benefits flow from the fact that the invention recognizes the separateness of content and structure." ('449 Patent, col. 6, lines 18-22.) In fact, the '449 Patent criticizes what it refers to as the "standard practice" of prior art systems that use embedded markup codes:

> While embedding structural information in the content stream is accepted standard practice, it is inefficient and inflexible in a digital age. For manual production of documents the intermingling of the markup codes with the content is still the best way of communicating structure. For electronic storage and manipulation it suffers from a number of shortcomings.

(*Id.* at col. 3, lines 14-20.)

The '449 Patent identifies a number of perceived disadvantages with the prior art approach of "intermingling of the markup codes with the content." (*Id.*) The patent criticizes prior art embedded code systems as "inflexible" because they "tie together structure and content into a single unit which must be modified together." (*Id.* at col. 3, lines 21-25.) According to the '449 Patent, this approach is problematic because it requires, for example, a user who only wants to make a small change to the structure of a document to access and concurrently save the content, even though the user does not wish to change the content. (*Id.* at col. 3, lines 25-33.)

The Patent further criticizes prior art embedded code systems for the difficulty of differentiating markup codes from the content stream. According to the '449 Patent, "this involves designated 'special' characters or sequences of characters which should be identified and acted upon," which in turn "complicates the task of any routine which must work on the document." (*Id.* at col. 3, lines 42-47.)

In addition, the '449 Patent states that the prior art suffers from processing speed disadvantages. (*Id.* at col. 3, lines 56-60.) According to the Patent, systems relying on embedded codes have to parse each item in the content stream "to determine if it is a special formatting character or is part of the content." (*Id.*)

The '449 Patent allegedly solves these perceived problems by: (1) separating out the metacodes from the content and placing them into a "metacode map"; and (2) storing the metacode map separately from the content. (*Id.* at col. 4, lines 5-10.)

The '449 Patent allegedly avoids the need to parse the content to find, recognize, and differentiate metacodes by extracting (i.e., separating) them and placing them in a separate metacode map:

> "[i]t is no longer necessary to parse the entire document to locate the embedded codes. Differentiating codes from content is obviously no longer a problem because they are held in different areas."

(from the Summary of the Invention, '449 Patent, col. 7, lines 43-46.)

The '449 patent allegedly solves the presumed "inflexibility and storage inefficiency" problems by storing the metacode map and the mapped content separately in *persistent storage* such as a hard disk, or, as stated by the Patent, in "separately stored and protected" units that allow changes to be made "solely on the metacodes" or "solely on the content." ('449 Patent, col. 7, lines 6-25.) Moreover, the Patent indicates that separately storing the map and the mapped content permits a user to change the structure of the document without having to save an entire new copy of the content of the document. Because "only a new metacode map has to be stored," the user need not waste disk space by creating a second identical copy of the unchanged content. (*Id.* at col. 7, lines 32-33.)

B. Important Highlights From The Prosecution History

To overcome the prior art, the Patentee repeatedly emphasized two points in its arguments to the Patent Office: (1) that metacodes were separated from the content; and (2) that the metacode map was held in "separate, persistent storage." These are discussed briefly below.

1. Separating Metacodes From Content

In the first office action on the merits, the Patent Office rejected the claims over U.S. Patent No. 5,404,435 ("Rosenbaum"). (Paper No. 3, p. 3, File History of the '449 Patent.) In response to the rejection, the Applicants unambiguously distinguished Rosenbaum alleging that

it did not disclose "extraction" of metacodes as "presently claimed." ('449 Patent File History, Paper No. 4, p. 7, below.)

> Further, even if, arguendo, Rosenbaum's documents did contain metacodes, he makes no mention of them. Nor does he in any way suggest, as presently claimed, extracting metacodes and "compiling a map of said metacodes" as recited in claim 14 or "means for compiling said metacodes" as recited in claim 1 or "a map of metacodes stored in distinct metacodes storage means," as recited in claim 20.

As prosecution continued, the Applicants repeatedly confirmed that extracting the codes is a required aspect of "the invention." (*See Id.* at p. 5; *see also* Paper No. 6, p. 5; and Paper No. 10, p. 7, ¶ 2)

2. Separate, Persistent Storage For The Metacode Map

Faced with a final rejection of its claims, the Applicants disavowed temporary storage of the metacode map, stating both unequivocally and repeatedly that "metacode map distinct storage" is "persistent (i.e., non-temporary)" as explained below.

To overcome one prior art reference, the Patentee represented to the Patent Office in a paragraph that begins "[i]n this invention" that:

> This separation is achieved by extracting metacodes from an existing document (or from a document being created) and creating a map of the location of the metacodes in the document and then **storing** the map and the content [sic] of the document **separately**.

(*Id.* at Paper No. 6, p. 5) (emphasis in original).

In the fourth office action, the Patent Office rejected the pending claims based on U.S. Patent No. 5,587,902 ("Kugimiya"). (*Id.* at Paper No. 9, p. 3.)

The Applicants admitted that Kugimiya taught extracting markup tags from a document and storing the tags (i.e., "kept temporarily") (*Id.* at Paper No. 10, p. 10, ¶ 3):

> First the tags are extracted and kept temporarily for later re-insertion into the a translated version of the document.

The Applicants further distinguished Kugimiya's temporary storage from "distinct storage means", stating that "Kugimiya does not need distinct storage means since he does not do

anything with the tags except **keep them aside temporarily** whilst doing other processing." (*Id.* at Paper No. 10, pp. 11-12) (emphasis added).

After stating that the metacode map is *stored separately* as a part of *this invention*, the Applicants further characterized "this invention" as follows:

> This separation is achieved by extracting metacodes from an existing document (or from a document being created) and creating a persistent (i.e., non-temporary) map of the location of the metacodes in the document and then storing the map and the content of the document separately.

(*Id.* at Paper No. 10, p. 8, ¶ 4) (emphasis in original). (Note the addition of "persistent (i.e., non-temporary)" to its prior argument.)

Despite all of these arguments, the Patent Office mailed a final office action rejecting all claims in view of Kugimiya. (*Id.* at Paper No. 11, p. 2.)

Subsequently, the Applicants arranged for an interview with the examiner, who recorded this brief description of the interview:

> Discussed claim language as compared to Kugimiya reference especially with reference to persistence of distinct storage and metacode menus.

(*Id.* at Paper No. 12) (emphasis added).

In a follow-up submission, the Applicants again stressed the importance of persistently storing the metacode map and distinguished Kugimiya on this point:

> We seemed to reach agreement that the reference does not teach . . . **persistent storage** for the metacode map. Claim 1 has been further modified to make it more clear that the metacode map is persistently stored separately and distinctly from the content . . . Contrast this with the Kugimiya reference which, like many other references, teaches the use of only **temporary storage** of metacodes while the program is doing its processing . . .

(*Id.* at Paper 13, p. 2) (emphasis added).

Thus, the '449 Patent was allowed because of the Applicants' representation that the metacode map was stored persistently, distinctly and separately from the content. As seen below, the Patentee disclaims it prosecution distinctions in the Litigation.

C. Arguments Presented In The Litigation By The Patentee

In sharp contrast to the patentability arguments made during prosecution, the Patentee now argues in the Litigation that "separation of metacodes" (*see* section IV.B.1 above) and

"separate, persistent storage" of the metacode map (*see* section IV.B.2 above) are not claim requirements.

For example, counsel for the Patentee has told the District Court that there is no persistence requirement because the Examiner did not require the word "persistence" to be added to the claims *despite* its earlier representations that the claims required persistent storage:

> We kept saying it was persistent because "persistent" means "i.e., non-temporary" to allow the promise of the claim to be fulfilled of allowing manipulation, and the examiner never required an applicant -- and he had not one, not two, but three opportunities to say to the applicants, well, okay I want you to amend the claim and put the word "persistent" in there. Make it so. Make it express. He never did…

(Markman Tr., pp. 101-102.)

To summarize, the Patentee's current claim interpretation contradicts the arguments that the Applicants made to overcome numerous prior art rejections made by the Patent Office. This section introduces several of Patentee's representations to the District Court in the Litigation that are relevant to determining the patentability of the claims.

1. The Scope Of The Claim Terms Presented By The Patentee In Litigation

Before the prior art can be applied, the Patent Office must consider the scope of the claims. During reexamination, patent claims are to be given the "broadest reasonable interpretation" in light of the specification. MPEP § 2258(G); *see also* § 2111 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005)).

During the Litigation, the Patentee has generally asserted a broad scope to the claims of the '449 Patent. Indeed, in at least one instance, the Patentee has argued to the District Court that statements in the prosecution history did not narrow the scope of the claims. (*See* section IV.C.1.d), below.)

On February 28, 2008, the District Court held a *Markman* hearing at which time the Patentee made numerous arguments in support of its proposed constructions. (*See generally* Markman Tr., Exhibit 5.) In many cases, the court adopted the Patentee's proposed constructions, in an order dated April 28, 2008 and made of record in the Litigation. (*See generally* Markman Order, Exhibit 6.)

Regardless of whether the court adopted the Patentee's constructions for any specific term or not, the Patent Office should not entertain a proposed construction in reexamination that

would be narrower than that presented by the Patentee in the Litigation because the claim construction standards are different.[5] *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984). Otherwise, the Patentee unjustly may receive broader claim scope when asserting the patent than the Patent Office considered when evaluating patentability against the prior art.

Of particular relevance to this Request are the following terms and phrases addressed by the District Court in the Litigation. These terms are addressed individually in the sections following the chart.[6]

§	Term	*(Patentee's Proposed)* Construction
a	metacode	an individual instruction which controls the interpretation of the content of the data
b	description code	a metacode that includes a description of the instruction provided by the metacode
c	metacode map	*a plurality of metacodes and their addresses of use corresponding to mapped content*
d	distinct map storage means	a portion of memory for storing a metacode map
e	mapped content	the content of a document corresponding to a metacode map
f	mapped content distinct storage means	a portion of memory for storing mapped content
g	address[es] of use	*an address which defines the portion in the content at which the metacode is to exert its effect*
h	providing the document as the content of the document and the metacode map of the document	*resolving the content and the metacode map into a single composite document, or providing the document as two separate discrete elements, i.e., mapped content and a metacode map*
i	providing the document as the content of the document separately from the metacode map of the document	*providing the document as two discrete elements, i.e., mapped content and metacode map*
j	compiling a map of the metacodes in the distinct storage means, by locating, detecting and	*creating a map of the metacodes and storing it in a portion of memory by identifying each metacode in the document,* *finding the position of the metacode relative*

[5] The Patent Office may use any statement made by the Patentee (that is of record in the Litigation or the prior prosecution) in determining whether the claims of the '449 Patent are patentable. MPEP §§ 2217, 2258.

[6] An entry in italics represents the Patentee's proposed construction that may have been modified or rejected by the District Court.

§	Term	*(Patentee's Proposed)* Construction
	addressing the metacodes	*to the content stream, and* *forming an address that defines the position in the content at which the metacode is to exert its effect*
k	providing a menu of metacodes	Not construed but argued as a part of "means for providing a menu of metacodes,"

a) Metacode

The District Court adopted the Patentee's proposed construction for metacode as "an individual instruction which controls the interpretation of the content of the data." (Markman Order, p. 31.)

For the purposes of this Request, it is sufficient to note that the '449 Patent expressly states that an "example of metacode language of use in the practice of the invention is SGML." ('449 Patent, col. 4, lines 63-64.)

Both Cowan and DeRose describe using SGML as a language for encoding structured documents.

b) Description code

The District Court adopted the Patentee's proposed construction for description code as "a metacode that includes a description of the instruction provided by the metacode."

Again, the '449 Patent explicitly identified SGML as the metacode language used in practicing the alleged invention. ('449 Patent, col. 4, lines 63-64.) SGML uses descriptive metacodes as confirmed by the SGML Standard (ISO-8879). (SGML Spec., p. 67.)

8.2 Markup

Markup is text that is added to the data of a document in order to convey information about it. In SGML, the markup in a document falls into four categories:

a) Descriptive Markup ("Tags")

Tags are the most frequent and the most important kind of markup. They define the structure of the document, as described above.

SGML Spec., p. 67

Since Cowan and DeRose disclosed using SGML, both described using description codes (e.g., Chapter, Title) as metacodes.

c) Metacode Map

The Patentee's proposed construction for metacode map was "a plurality of metacodes and their addresses of use corresponding to mapped content." (Markman Order, p. 7.)

Although the District Court adopted a narrower construction for the term, the Patentee resisted the Defendant's proposed construction at the Markman hearing. At that time, the Patentee argued that limiting the term to a "data structure" would be importing a limitation from the specification:

> MR . WHITE : The definition being proposed by Microsoft is a classic example of an effort of the defendant to take the written specification and the description of the preferred embodiment and attempt to ingraft extraneous limitations into the claim that aren't necessary . . . .
>
> I think the Court ought to reject what Microsoft is doing and use the language that the patentee used to define what a "map of metacodes" was.
>
> THE COURT : What do you think are the limitations they are seeking to import?
>
> MR . WHITE : Particularly, Your Honor, where each metacode was or will be embedded, for example, is extraneous. A data structure is also extraneous. It is not even based on any disclosure in the patent. For us to say -- I'm sorry. For the inventors to have said in their patent that the "map of metacodes" is a structure, it didn't say this was a data structure which has some clear and common ordinary meaning within the art. It just said it had a structure. That means there is some organization to the way the data is put into the map. And the example we give in the patent is in the example of a table. You have rows and columns. You put a metacode in one column and you put the addresses of use in another column.
>
> So references in the spec to a structure does not necessarily mean it is a data structure. But putting all that aside, Your Honor, the specification was unambiguous when it presented a definition of what a "map of metacode" was; and that says what we proposed for the Court, Your Honor.
>
> (Markman Tr., p. 61-62.)

The Patent Office should not entertain a construction narrower than that proposed by the Patentee. Since the Patentee's construction is not limited to any particular data structure (or collection of structures), both Cowan and DeRose disclose the creation of "metacode maps."

d) Distinct Map Storage Means

The District Court adopted the Patentee's proposed construction for distinct map storage means as "a portion of memory for storing a metacode map." (Markman Order, pp. 11-16, 31.)

At the *Markman* hearing, the Defendant argued that this term should be limited to storage on a hard disk, in part due to statements made by the Applicants during prosecution that the invention was distinguishable over Kugimiya.

During prosecution, the Applicants argued that the metacode map was in "persistent storage" and that the metacode map in Kugimiya was only "temporary." As a result, the claims were allowed. However, at the *Markman* hearing, the Patentee argued that "persistent" was something less than "permanent" but more than "temporary." (Markman Tr., pp. 101-102, below.) Specifically, the Patentee's position was that the "distinct map storage means" could be the computer's random access memory:

> There was no -- there was no disclosure anywhere in here. When it said "metacode map distinct storage means" it did not say metacode map hard drive, it didn't say RAM. It just said "storage means." And "storage means" means memory. It means a place to store data. And in a computer system we show two embodiments for that. We claimed the invention in terms broader than our disclosure, which we are entitled to do. They want to limit it now to one of those embodiments.
>
> And it is the embodiment that was the preferred embodiment described in the figures. But when this claim -- when those claims were argued to the examiner, Kugimiya -- it was made the argument about persistent. We kept saying it was persistent because "persistent" means "i.e., non-temporary" to allow the promise of the claim to be fulfilled of allowing manipulation, and the examiner never required an applicant -- and he had not one, not two, but three opportunities to say to the applicants, well, okay I want you to amend the claim and put the word "persistent" in there. Make it so. Make it express. He never did because the examiner understood it was just a temporal issue; that the scope of the claims was commiserate [sic] with the disclosure, and there wasn't any prior art out there that commanded that amendment."
>
> (Markman Tr., pp. 101-102.)

Notably, the district court did not place any temporal limitation on this term. Accordingly, this element is fulfilled simply by storing a metacode map in a portion of memory, which could be either RAM or a hard disk (or both), based on the Patentee's representation that there were both RAM and hard disk embodiments disclosed in the '449 Patent.

Both Cowan and DeRose disclose systems that store the metacode map independently of the content. In each case, the metacode map is stored in one or more data structures (e.g., a file or a tree/field list) either in RAM or on a hard disk.

e) Mapped Content

The District Court adopted the Patentee's proposed construction for "mapped content" as "the content of a document corresponding to a metacode map." (Markman Order, p. 31.)

During the *Markman* process, a principal dispute between the Patentee and the Defendant was whether "mapped content" required that the metacodes had to be removed from the structured document during the decomposition process. The Patentee argued that "mapped content" includes the situation in which metacodes are not removed, stating that the claims do not use the phrase "extract" and that "addressing" does not require extraction.

> Now, Your Honor asked me just a moment ago whether the invention requires extracting the metacodes. And I think I responded that it does not require it. The claims don't speak to the issue of when you are creating the metacode maps by virtue of this means for compiling, nowhere in there – in fact, it says "for compiling said metacodes of the menu by locating, detecting, and addressing." It does not say locating, addressing, and extracting the metacodes. The claim is written in terms broader than this aspect of whether you extract the metacodes or not. And, in fact, when you look at the specification you will see that both "raw content," which means they are all extracted; or "mapped content," which means that they don't have to be extracted, are preferred embodiments of this invention. This claim is claimed in terms broad enough to cover both embodiments.
>
> (Markman, Tr., pp. 14-15) (emphasis added).

Accordingly, for the purposes of this Request, it is irrelevant whether the "mapped content" contains metacode information or not, as long as there is a separate data structure (e.g., a tree list as disclosed by both Cowan and DeRose) that describes the structure of the document.

f) Mapped Content Distinct Storage Means

The District Court's construction for "mapped content distinct storage means" is "a portion of memory for storing mapped content." (Markman Order, p. 31.)

For the same reasons as discussed with respect to "map distinct storage means" above, the "mapped content" may be stored in either RAM or on a hard disk without temporal limitation.

Again, both Cowan and DeRose disclose systems that store the metacode map independently of the content. In each case, the mapped content is stored in a data structure (e.g., a file or a line list) either in RAM or on a hard disk that is separate from the metacode map.

g) Address[es] Of Use

The District Court's construction for "address[es] of use" is "a unique identifier which defines the position of a metacode relative to a mapped content stream and the place in the content at which the metacode is to exert its effect." (Markman Order, p. 31.)

However, the Patentee had argued that the term meant "an address which defines the portion in the content at which the metacode is to exert its effect." (Markman Order, pp. 6.) Accordingly, the Patent Office should apply an interpretation at least as broad as this.

With respect to this Request, both Cowan and DeRose describe using pointers to map the SGML metacodes in one data structure to the text content in separate data structures(s). As is well known in the art, pointers (regardless of whether absolute or relative addressing is used) are addresses to other data structures.

h) Providing The Document As The Content Of The Document And The Metacode Map Of The Document

The District Court's construction for "providing the document as the content of the document and the metacode map of the document" is "providing the document as a single composite document or providing the document as two separate discrete elements, specifically the content of the document and a metacode map of the document." (Markman Order, p. 32.)

The Patentee had argued that the proper interpretation of this term was "resolving the content and the metacode map into a single composite document, or providing the document as two separate discrete elements, i.e., mapped content and a metacode map." (Markman Order, pp. 24-25.) Notably, the District Court rejected a construction that would have required that two separate files were required by this claim element. (Markman Order, pp. 25-26.)

Under the Patentee's proposed construction (or even the District Court's construction), both Cowan and DeRose would anticipate this element, because Cowan states that documents are stored as an ASCII file with tags embedded in the content (the first option of the Patentee's construction), while DeRose states that the decomposed document can be stored in separate file objects.

Additionally, since there is no explicit target of the "providing" step, the element is anticipated by providing the document to the user for editing the separate components or to a rendering process for printing or display.

i) Providing The Document As The Content Of The Document Separately From The Metacode Map Of The Document

The District Court adopted the Patentee's proposed construction for "providing the document as the content of the document separately from the metacode map of the document" as "providing the document as two separate discreet [sic] elements, specifically the content of the document and a metacode map of the document."

However, although not explicitly stated in the construction, the District Court rejected a construction that would have required that "separately" meant two separate files based, in part, on the Applicants' statements regarding Kugimiya. (Markman Order, p. 26.) Rather, the Court determined that the phrase includes the situation where the map and the mapped content are separate components of a single file (or memory).

j) Compiling A Map Of The Metacodes In The Distinct Storage Means, By Locating, Detecting And Addressing The Metacodes

The District Court's construction for this phrase is:

> creating and storing a map of metacodes in the distinct storage means by:
>
> finding the positions of the metacodes in and relative to an input content stream;
>
> recognizing, identifying or differentiating the metacodes from content; and
>
> forming unique identifiers which define the positions of the metacodes relative to the mapped content stream and the places in the content at which the metacodes are to exert their effect. (Markman Order, p. 32.)

However, the Court's construction is more restrictive than that offered by the Patentee in the Litigation:

> creating a map of the metacodes and storing it in a portion of memory by identifying each metacode in the document,
>
> finding the position of the metacode relative to the content stream, and
>
> forming an address that defines the position in the content at which the metacode is to exert its effect. (Markman Order, p. 23.)

The Patent Office should apply a construction at least as broad as that requested by the Patentee using the "broadest reasonable interpretation" principle.

While Cowan and DeRose vary in the level of disclosure of the process of compiling the SGML metacode map, the SGML Standard itself specifies the algorithm(s) for an SGML parser

that differentiates between valid SGML markup tags and the marked-up content. (SGML Spec., p. 68-69.) Accordingly, Cowan and DeRose disclose this element, either expressly or inherently.

k) Providing A Menu Of Metacodes

The District Court did not provide an explicit construction regarding this term. However, claim 1 recites a similar element -- "means for providing a menu of metacodes" -- and the Patentee made several statements during the *Markman* hearing regarding what it means to provide a menu of metacodes in the context of the '449 Patent.[7]

More specifically, the Patentee argued that a menu was simply a list and that the list could be "provided" by reading the Document Type Definition ("DTD") for the SGML language.

> So 'a menu of metacodes,' would be a list of metacodes that would be provided to this system. (Markman Tr., p. 16) (emphasis added).

> There is a concept in SGML -- it is also in all markup languages, is that a document that is encoded according to that standard can have with it something that is called a DTD. . . . A document type definition. That is a menu that has been supplied for this document. And it is a list of all of the accepted tags that can go into this document. You may use some or all of them, but at least you have a predefined menu that will be used by whoever wants to work on that document. (Markman Tr., p. 45) (emphasis added).

Notably, the literal language of the claims does not establish either a source or recipient for the "providing" step. Thus, the Patentee's statement that this could be a list of metacodes provided to the system does not require an additional step that the list be displayed to the user.

According to the Patentee's expert in the Litigation,

> One of ordinary skill in the art would recognize that a menu of metacodes consists of a list of possible metacodes to choose from, and that this "menu" must exist separately in memory from the metacode map. This is because the menu is not intended to be a list of all the instances of metacodes that are contained in the document and in the metacode map, only a list of available types of metacodes.

(Payne Decl., ¶ 21.) Dr. Payne further acknowledged:

> 23. The use of menus and storage in memory in computer software systems is ubiquitous to software systems, and well-known in the art in 1994.

(Payne Decl., ¶ 23.)

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[7] The court found that the '449 Patent did not disclose any structure corresponding to the "means" and held that claims 1-13 were indefinite under 35 U.S.C. § 112, ¶ 2.

In the context of this Request, both Cowan and DeRose disclose using SGML, and thus the SGML DTD, to determine the proper syntax and grammar for a structured document. Cowan further discloses displaying menus of valid metacodes during the process of editing the document structure. The SGML DTD identifies the "list of possible metacodes to choose from" (in Dr. Payne's words) when a user is creating or editing an SGML document. Accordingly, both Cowan and DeRose disclose providing a menu of metacodes.

2. The Patentee's Alleged "Level Of Ordinary Skill In The Art"

The teaching of the prior art is to be evaluated from the perspective of the person of ordinary skill in the art. Additionally, the level of ordinary skill in the art is a factor in determining whether a claim is obvious. *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

In the concurrent Litigation, the Patentee filed a declaration with the court identifying the qualifications of the person of ordinary skill in the art. (Payne Decl., ¶ 13, below.)

> 13. I find the pertinent art to lie generally in the field of computer programming. Considering all of the factors in the context of the technology of the '449 patent, I believe that a person of ordinary skill in the art would have a Bachelor of Science degree in computer science or a Bachelor of Science degree in electrical engineering with an emphasis on computer systems and two to three years of working experience in the art of writing computer programs.

While the Requester does not necessarily regard this as correct, it is nevertheless an admission by the Patentee that can be used in evaluating the patentability of the claims. MPEP § 2258.

3. The Remaining Claim Terms

Not all claim terms have been addressed in the Litigation, nevertheless, these terms (and the scope of the claims as a whole) must be given the broadest reasonable interpretation as well for the purposes of reexamination.

D. The Prior Art Cited In This Request Raises A Substantial New Question Of Patentability

This Request presents two prior art references that anticipate claims 14-20 of the '449 Patent, especially in light of the claim interpretations that have been asserted by the Patentee in the Litigation. A reference raises a substantial new question of patentability if it contains a new

teaching that was not present during a prior examination (or if it contains an "old" teaching that was not fully appreciated at the time), and thus would not be cumulative to issues previously considered by the Patent Office. MPEP § 2242.

During the original prosecution, the Patentee overcame the prior art (Kugimiya) by stating that Kugimiya did not "persistently" store the metacode map separately from the mapped content. During Litigation, the Patentee convinced the District Court that this statement was not a clear disclaimer of claim scope and that "persistently" does not mean "permanently."[8] (Markman Order, pp. 12-14.)

However, for the purposes of this Request, it is irrelevant whether the Patent Office understood "persistently" to mean "permanently" or "to be longer than temporary, but shorter than permanently," because the DeRose and Cowan references respectively describe systems that separately store metacode maps "persistently" (which according to the Patentee is merely "long enough to allow the user to edit the metacode map or content") as well as "permanently" (which the '449 Patent suggests is "storing on a hard disk") as detailed in Section V, below.

Accordingly, these references both contain a new teaching that the Applicants alleged was absent from the prior art. As explained below, each of these references meets the criteria for establishing a substantial new question of patentability.

1. The DeRose Patent Raises A Substantial New Question

U.S. Patent No. 6,101,512 issued to DeRose, et al. on August 8, 2000 based on an original application filed July 1991. Accordingly, DeRose is prior art under 35 U.S.C. § 102(e).

DeRose teaches the decomposition of an SGML encoded document (DeRose, Fig. 4) into two data structures: a metacode map (as illustrated in DeRose, Fig. 6) and a separate file object containing the text content. (DeRose, col. 10, lines 50-59.) DeRose further teaches that the user can independently annotate the document structure (i.e., the metacode map) and the text content (i.e., mapped content), and that the resulting decomposed data structures can be saved permanently to hard disk, which the Patentee argued to the District Court is "a whole lot longer than stored persistently" (*see* footnote 8).

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[8] "And I would submit to the Court, Your Honor, that the term 'stored permanently' is a whole lot longer than stored persistently on a hard disk." (Markman Tr., p. 98.)

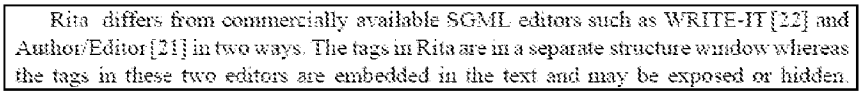
DeRose is not prior art of record, and the teaching of DeRose was not present during any prior examination of the patent in which the Applicants argued that the prior art did not show persistent storage of the decomposed document. Accordingly, the teaching of DeRose is not cumulative to the prior art previously considered. Additionally, DeRose has not been the subject of a final holding of a district court invalidating claims 14-20 of the '449 Patent.

Because of this teaching, DeRose would have been important to a reasonable examiner in determining whether the claims of the '449 Patent were patentable. Accordingly, a substantial new question of patentability is raised by DeRose.

2. The Cowan Article Raises A Substantial New Question

Prior to 1991, computer scientists at the University of Waterloo developed Rita, an editor for structured documents. D.D. Cowan and others described Rita in an article titled "Rita – an editor and user interface for manipulating structured documents," published in the September 1991 issue of Electronic Publishing, Vol. 4(3), pp. 125-150. Accordingly, Cowan is prior art at least under 35 U.S.C. § 102(b).

Cowan teaches the decomposition of an SGML-encoded document into two data structures: a metacode map (i.e., a tree list and field list that records the document structure); and a separate object containing the raw text (i.e., the line list). (*See generally*, Cowan, pp. 133-134 Cowan further teaches that the user can independently edit the document structure (i.e., as illustrated in the left hand pane of the user interface) and the text content (i.e., as illustrated in the right hand pane of the user interface). (Cowan, p. 147; *see also* Fig. 4.)



Rita differs from commercially available SGML editors such as WRITE-IT [22] and Author/Editor [21] in two ways. The tags in Rita are in a separate structure window whereas the tags in these two editors are embedded in the text and may be exposed or hidden.

Cowan, p. 147

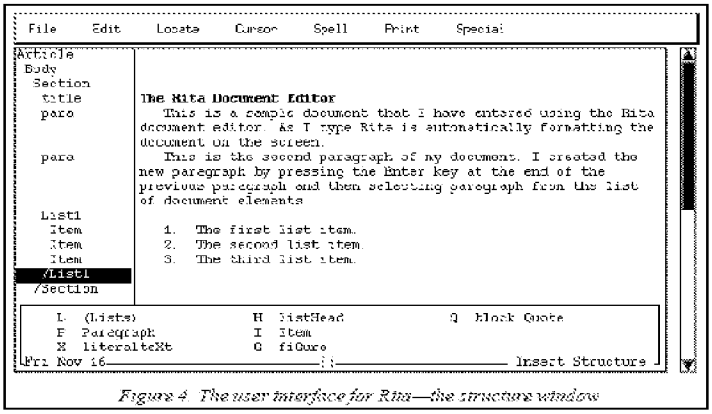


Figure 4. The user interface for Rita—the structure window

Cowan, Fig. 4, p. 131

Cowan teaches storing the tree list and line list data structures long enough to allow the user to be able to edit each of them independently (argued by the Patentee during Litigation as the "true" meaning of "persistently" as that term was used to overcome the Kugimiya reference during prosecution.) (*See* Markman Tr., pp. 86-98.)

Cowan further teaches validation and re-integration of the metacode information with the text content when saving the structured document after it has been edited. (*Cf.*, creating a composite document, Markman Tr., pp. 12-13.)

Cowan is not prior art of record, and the teaching of Cowan was not present during any prior examination of the patent in which the Applicants argued that the prior art did not show "persistent" storage of the decomposed document. Accordingly, the teaching of Cowan is not cumulative to the prior art previously considered. Additionally, Cowan has not been the subject of a final holding of a district court invalidating claims 14-20 of the '449 Patent.

Because of this teaching, Cowan would have been important to a reasonable examiner in determining whether the claims of the '449 Patent were patentable. Accordingly, a substantial new question of patentability is raised by Cowan.

E. Claim 20 Is Invalid Over DeRose

Reexamination shall be granted if a request raises a substantial new question of patentability as to at least one claim of a currently enforceable U.S. Patent. (35 U.S.C. § 304.) Claim 20 is a representative claim that is anticipated by DeRose; and thus, reexamination is warranted.

Claim 20 recites the following method:

> A method for producing from a document made up of metacodes and content, a map of metacodes and their addresses of use in association with mapped content of the document and stored in distinct map storage means, the method comprising:
>
> (a) reading the content of the document until a metacode is found;
>
> (b) copying the content and storing the copied content in a mapped content storage;
>
> (c) noting in the map the found metacode and its position in the content;
>
> (d) repeating the processing of (a)-(c) until the entire document has been processed; and then
>
> e) providing the document as the content of the document separately from the metacode map of the document.

The subject matter of this entire claim is disclosed by the algorithm illustrated in DeRose, Fig. 8. Recall that DeRose decomposes SGML files (i.e., a document made up of metacodes and content) of the type shown in DeRose, Fig. 4. From this document, a metacode map (i.e., a plurality of metacodes and their addresses of use corresponding to mapped content) as shown in Fig. 6 is produced. (DeRose, col. 12, lines 55-58, below) (*see also* section IV.C.1.c) above).

> With the procedure as described in the flowchart FIG. 8, a document having descriptive markup, for example the document of FIG. 4, may be parsed and an element directory 91, for example as shown in FIG. 6, be generated. This

The element directory (i.e., metacode map) contains the metacodes **102** (e.g., BOOK, TITLE, AUTHOR, CHAPTER) (which may be fully qualified as shown in Fig. 6 or not) and the address of the text in the separate "mapped content storage" (e.g., #TEXT pointers **73**, **75** at col. **104**).

91

	92	94	96	98	100	102	104	
70	NIL	71	76	NIL	NIL	BOOK	NULL	90
71	70	72	74	NIL	76	BOOK,FM	NULL	
72	71	73	73	NIL	74	BOOK,FM, TITLE	NULL	
73	72	NIL	NIL	NIL	NIL	#TEXT	<POINTER>	
74	71	75	75	72	NIL	BOOK,FM, AUTHOR	NULL	
75	74	NIL	NIL	NIL	NIL	#TEXT	<POINTER>	
76	70	77	77	71	NIL	BOOK,BODY	NULL	
77	76	78	80	NIL	NIL	BOOK,BODY, CHAP	NULL	

DeRose, Fig. 6 – Excerpt of element directory 91

The metacode map and the text content of the decomposed document are held in separate file objects (i.e., distinct storage areas). (DeRose, col. 10, lines 50-59, below.)

> "#ROOT". Three file objects are also created, in the step **110** of initialization, on the mass storage device **34**. These file objects are called the element directory, the fully-qualified name table and the text content. The element directory, fully-qualified name table and text content of a document are written to these file objects, respectively, during the indexing process. Creating these file objects and writing to them are normally handled by instructions to the operating system of the data processing system **30**, to open a file and write to it.

During the "indexing process" illustrated in Fig. 8, the entire document is parsed. Finally, the "element directory" file object and the "text content" file object can be "provided" separately to a variety of processes for rendering on a display (using a style sheet), for printing, or for annotation by the user; or the file objects can be stored on hard disk for later use. (DeRose, col. 12, line 54 – col. 13, line 5, below.)

With the procedure as described in the flowchart FIG. 8, a document having descriptive markup, for example the document of FIG. 4, may be parsed and an element directory 91, for example as shown in FIG. 6, be generated. This element directory may then be used to traverse, i.e. navigate, the document, since, for each element, the parent element, sibling elements, child elements, and previous elements may be readily accessed in constant time. Such navigation is helpful for combining rendering of the document, full text indexing, generating a table of contents, and creating annotations, bookmarks and history logs. Moreover, since an entry in the element directory may be retrieved in constant time, the element directory and fully-qualified name table

may be stored and accessed efficiently on a random-access medium 34 (FIG. 1) such as a disk. Thus, for large documents, the system of the present invention is not limited by the amount of hard RAM in the memory unit 42 of the main computer 32.

In summary, the totality of claim 20 is anticipated by DeRose. Accordingly, this Request should be granted. As explained in greater detail below, claims 14-19 are also invalid over the prior art cited herein.

F. Certain Claim Elements Are Necessarily Disclosed By Cowan And DeRose

In expectation that the Applicants may attempt to argue that DeRose and Cowan do not explicitly disclose certain claim elements, the Examiner should be mindful that an SGML parser is an inherent part of an SGML processing system.

1. SGML Processing Systems Inherently Include A Parser To "Detect, Locate, And Address The Metacodes" Contained In An SGML Document

All SGML processing systems have a parsing process that is capable of detecting, locating, and addressing SGML tags. (*See* SGML Spec., p. 68, below.)[9] The ISO-8879 SGML Standard, which was published in 1986, is explicitly identified in both the '449 Patent as well as DeRose.

An SGML system must recognize these four kinds of markup and handle them properly; that is, it must have an "SGML parser". The parser need not be a single dedicated program; as long as a system can perform the parsing process, it can be said to have an SGML parser.

Markup occurs in a document according to a rigid set of rules. Some of the rules are dictated by SGML; they apply to all types of document. Other rules are defined by the document type definition for the type of document being processed.

Employing the rules of SGML, the markup parser must:

a) Scan the text of each element's content to distinguish the four kinds of markup from one another and from the data. (Noncharacter content data is not scanned by the parser.)

b) Replace entity references by their entities.

c) Interpret the markup declarations.

d) Give control to the processing system to execute processing instructions.

e) Interpret the descriptive markup tags to recognize the generic identifiers ("GIs") and attributes, and, following the rules of the document type:
   i) Determine whether each GI and its attributes are valid.
   ii) Track the location in the document structure.

f) Give control to the processing system to execute the procedure associated with the GI. (Once again, there is no actual requirement for separate programs. "Giving control" means only that the ensuing processing is not defined by this International Standard.)

(SGML Spec., p. 68)

More specifically, according to the SGML standard, an SGML parser will**:**

(1) Scan the SGML-encoded document to determine what portions are metacodes and what portions are text (as well as determine whether the metacodes are valid structurally and semantically); and

(2) Track the location of the metacodes in the document structure (i.e., build a map of the metacodes in the document).

The SGML Standard further defines an SGML parser to be any program (or portion or combination) that can recognize SGML markup tags in a conforming document. (SGML Spec., § 4.285 and § 6.2 respectively, below.)

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[9] It should be noted that the '449 Patent is silent as to how to handle non-character data that may be contained in an SGML file.

4.285 SGML parser: A program (or portion of a program or a combination of programs) that recognizes markup in conforming SGML documents.

NOTE — If an analogy were to be drawn to programming language processors, an SGML parser would be said to perform the functions of both a lexical analyzer and a parser with respect to SGML documents.

The characters of an SGML entity are parsed in accordance with this International Standard to recognize the *SGML declaration*, *prolog*, and *document instance set*, and their constituent parts.

Each *SGML character* is parsed in the order it occurs, in the following manner:

a) The character is tested to see if it is part of a delimiter string (see 9.6). If a general delimiter string is recognized, the appropriate delimiter action is performed. If a *short reference* is recognized, it is treated as specified in 9.4.6.

b) If the character is not part of a delimiter string, or it is part of an unmapped short reference, it is tested to see if it is a separator; if so, it is ignored.

c) If the character is not part of a delimiter or a separator, it is treated as data.

If an *SGML character* is a *function character*, its function is performed in addition to any other treatment it may receive.

Both Cowan and DeRose teach parsing SGML-encoded documents, and thus inherently disclose the techniques described in the SGML Standard. (*See* Cowan, p. 127; *see also* DeRose, col. 8, lines 27-33; *and* col. 11, lines 1-9, below.)

connection with FIG. **5**. In the preferred embodiment, for documents in SGML, parsing is simplified if the provided document is in normalized, or "minimal", form. This form of an SGML document is defined by the standard mentioned above in section 15.1.2 thereof. Parsers and normalizers for SGML are well known. For example, the XGMLT™ Engine and the XGML™ Normalizer, both available from Exoterica Corporation of Ottawa, Ontario, Canada may be used for validating, parsing, and normalizing SGML documents.

2. SGML Processing Systems Inherently Include "Provide A Menu Of Metacodes" Based On The Document Type Definition File

SGML processing systems with a "validating parser" go beyond identifying the descriptive markup tags in the SGML document. The parser will also "determine whether each

generic identifier and its attributes are valid; that is, whether the document has been legally structured within the constraints of the grammar imposed by the Document Type Definition file. (SGML Spec., p. 69.)

This necessarily requires that that the SGML processing system reads the DTD file, the process of which, as was admitted by the Patentee to the District Court, is an example of "providing a menu of metacodes."

> "So 'a menu of metacodes,' would be a list of metacodes that would be provided to this system. (Markman Tr., p. 16) (emphasis added).
>
> "There is a concept in SGML -- it is also in all markup languages, is that a document that is encoded according to that standard can have with it something that is called a DTD. . . . A document type definition. That is a menu that has been supplied for this document. And it is a list of all of the accepted tags that can go into this document. You may use some or all of them, but at least you have a predefined menu that will be used by whoever wants to work on that document." (Markman Tr., p. 45.)

V. DETAILED EXPLANATION UNDER 35 CFR 1.510(B)(3)[10]

A. Identification Of The Prior Art

1. Requester submits that claims 14-20 of the '449 Patent are invalid under 35 U.S.C. §§ 102,103 in light of the following prior art references:

> U. S. Patent No. 6,101,512 to DeRose, et al., entitled "Data Processing System And Method For Generating A Representation For And Random Access Rendering Of Electronic Documents," issued on August 8, 2000, from an application originally filed on July 19, 1991 (hereinafter "**DeRose**"); and
>
> Cowan, D.D., et al., *Rita – an editor and user interface for manipulating structured documents,* Electronic Publishing, Vol. 4(3), pp. 125-150, published September, 1991 (hereinafter "**Cowan**").

2. These references are not prior art of record. Additionally, each is not cumulative to the prior art of record and neither has been the subject of a final holding of invalidity by the courts. Accordingly, this is "new" prior art that raises a substantial new question of patentability, whether considered alone or in combination with one another.

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[10] For the Examiner's convenience, the paragraphs of this Section are numbered to simplify citation.

B. The SNQs Raised By The Prior Art

SNQ #1 Anticipation By DeRose

3. Claims 14-20 are invalid under 35 U.S.C. § 102(e) in view of DeRose as explained in greater detail below and by reference to the claim chart of Appendix A to the Request for Reexamination.

4. DeRose generally teaches a system and method for decomposing an SGML-encoded document into separate data structures (e.g., file objects). One file object contains a map of the metacodes that were contained in the structured document along with pointers to the location of the text content that is to be affected by each corresponding metacode. A second file object contains the text content.

5. Thus, DeRose makes it possible to edit the structure of a document independently from the content.[11]

CLAIM 14

6. As to claim 14, DeRose discloses a method for producing a first map of metacodes and their addresses of use in association with content mapped and stored in distinct map storage means. An exemplary map is illustrated as the "element directory" in DeRose, Fig. 6. The metacodes (i.e., exemplary SGML tags) are identified in column **102** (e.g., title, author, chaptitle). The metacode map is associated with the mapped content (i.e., text) and is stored in "distinct storage means" as the metacode map and the mapped (text) are stored in separate files in a memory (e.g., mass storage device **34**). (DeRose, col. 10, lines 50-59.) DeRose's metacode map identifies each metacode that appears in the document. If a metacode is not "empty," then the metacode element points to the corresponding text element, which in turn uses a pointer to identify the associated text in the mapped, "text content" file. (DeRose, col. 9, lines 23-38.) This qualifies as a metacode map using the Patentee's construction proposed in the Litigation, which was "a plurality of metacodes and their addresses of use corresponding to mapped content." (Markman Order, p. 7.)

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[11] DeRose notes that documents may be stored on a read-only medium, and thus implicitly states that a document may be potentially edited. It should be noted that the '449 Patent claims do not explicitly require that the "metacode map" and/or content be actually edited by the user.

7. DeRose further discloses "providing the mapped content to mapped content storage means." One of the three files created on mass storage device **34** is used to store the text content (DeRose, col. 10, lines 50-59.)

8. DeRose further discloses "providing a menu of metacodes." As admitted by the Patentee before the District Court, the SGML Document Type Definition (DTD) file identifies the metacodes that can appear in an SGML file. (Markman Tr., p. 45.) The DTD is used to identify what valid metacodes are contained in the source document and to determine if the structure of the document is valid. (*Compare* DeRose, col. 8, lines 27-33; col. 11, lines 1-9 *with* '449 Patent, col. 8, lines 49-53, above; *see also* SGML Spec., p. 68.) Further, to determine if the structured document is a proper SGML document (as suggested by DeRose), the system inherently must incorporate the grammar restrictions defined by the SGML DTD. (*See* SGML Spec., p. 68.) Additionally, column **102** of the element directory constitutes a menu of the metacodes that appear in the document. (*See* DeRose, Fig. 6, block **102**.) The literal language of the claims does not require that the menu be provided or displayed to the user. As admitted by the Patentee in the Litigation, the menu need only be provided to the system (Markman Tr., p. 14-15), such as by reading the DTD.

9. DeRose further discloses compiling a map of the metacodes (e.g., Fig. 6) in the distinct storage means (i.e., the element directory file on mass storage **34**) by locating, detecting and addressing the metacodes. The process of constructing the map is detailed in DeRose, col. 10, line 41 – col. 12, line 54, and the algorithm is illustrated in DeRose, Fig. 8. To summarize, an SGML-encoded document is parsed (which is an inherent part of an SGML system.) (*See* SGML Spec., p. 68.) When a formal SGML tag is found, its type is identified and written to the element map. (DeRose, Fig. 6.) If the tag has associated text content, the text is added to the text content file and appropriated linkages are created in the element map to associate the text with the tag, including placing the address of the text content in the element map. This process continues until the entire document has been parsed. (*See generally* DeRose, Fig. 8; *see also* col. 10, line 41 – col. 12, line 54.)

10. Finally, DeRose discloses "providing" the document as the content of the document (i.e., the text content file on mass storage **34)** and the metacode map of the document (i.e., the element directory file on mass storage **34**.) (DeRose, col. 10, lines 50-59.) After the original SGML document has been parsed, the resulting element directory and mapped content

can be used to render the document in a variety of formats. (DeRose, col. 12, lines 54-65.) In one example, the document can be provided to a rendering process for "displaying and formatting" as the separate files containing the element directory and text content. (DeRose, col. 17, lines 50-60.) It can also be saved on the hard disk for later use. (DeRose, col. 12, lines 45-50; *see also* col. 12, line 64 - col. 13, line 2.)

CLAIM 15

11. As to claim 15, DeRose discloses detecting and locating a multiplicity of metacodes constituting the menu in a document. (*See generally* claim 14, above.) Specifically, DeRose teaches parsing an SGML-encoded document to detect and locate a multiplicity of metacodes (i.e., the reserved metacode syntax of SGML). (*Compare* DeRose, col. 8, lines 27-33 *with* '449 Patent, col. 8, lines 49-53.)

12. DeRose discloses storing the multiplicity of metacodes (i.e., element directory, Fig. 6; specifically, column 102), in whole or in part, in the distinct storage means (mass storage device **34**). (DeRose, col. 10, lines 50-59; *see also* col. 12, line 64 - col. 13, line 2.)

13. DeRose discloses detecting and locating mapped content in the document. More specifically, DeRose teaches that the text content is detected and located during the parsing of an SGML document. (*See generally,* Fig. 8, blocks 141, 142, 144, 146, and associated description.) The text is identified in the element directory by a "#TEXT" descriptor that is associated with a pointer to the location of the text that was written into the text file object. (*See, e.g.*, Fig. 6, block 75 and associated description; *see also* DeRose, col. 10, lines 50-59.)

14. DeRose discloses storing the mapped content (i.e., text content of a document), in whole or in part, in the distinct storage means (mass storage device **34**). (DeRose, col. 10, lines 50-59; *see also* col. 12, lines 45-50.)

CLAIM 16

15. As to claim 16, DeRose discloses that a structured document file can be edited using well-known editors. (DeRose, col. 8, lines 34-37.) Editing the metacodes in a document will necessarily produce a second map.

16. In another mapping, DeRose also discloses using "normalizing" software on SGML files, which will eliminate redundant tags from an SGML document to produce a "minimal" markup. Again, using a normalizer will amend the multiplicity of metacodes contained in a source document. (DeRose, col. 11, lines 1-9.) (The antecedent basis for

"multiplicity of metacodes" refers to the codes in the source document, not the metacode map. (*See* ¶ 11, above.)

17. In a third mapping, DeRose additionally describes the potential for adding annotations to the document structure. (DeRose, col. 23, line 60 – col. 24, line 6.) DeRose further states that annotation capability may need to be provided without modification of the document (*Id.*), which implicitly discloses that annotations may be made by modification of the structured document and thus the multiplicity of metacodes will be altered, resulting in a second map.

CLAIM 17

18. As to claim 17, DeRose discloses that the metacodes are "description codes" as it discloses the same SGML tags used by the '449 Patent. (*See, e.g.,* DeRose, Fig. 4, <Title>,<Chapter>, <P>, etc.; *see also* col. 7, line 60 – col. 8, line 5.) The SGML Standard further confirms that these tags are inherently "descriptive." (SGML Spec., p. 68.)

CLAIM 18

19. As to claim 18, DeRose discloses comparing the multiplicity of metacodes in the map with a predetermined set of criteria. (The '449 Patent does not identify any specific set of criteria.)

20. Specifically, DeRose discloses using "validating" software on SGML files, which will compare the actual structure of the document against the grammar contained in the SGML Document Type Definition file, which is a predetermined set of criteria. (DeRose, col. 11, lines 1-9; *see also* SGML Spec., § 4.285.)

21. In another mapping, DeRose teaches using the metacode map (i.e., element directory) in combination with a style sheet document to render the mapped content for a particular printer or display. In this process, each metacode in the map is compared with the formatting criteria specified in the style sheet (i.e., font name, font size, bolding, italics, etc.). An example of a style sheet is illustrated in DeRose, Fig. 15, an excerpt of which is shown below. Different style sheets can be used to generate different views and structures of the same content. (DeRose, Figs. 12-14, and accompanying text.)

CLAIM 19

22. As to claim 19, DeRose discloses applying the first map to the mapped content to provide a differentiated document (e.g., a document rendered for the format of a specific display

or printer.) Different style sheets can be used to generate different views and structures of the same content. (DeRose, Figs. 12-14, and accompanying text.)

23. DeRose further discloses that annotations (e.g., a second map) can be combined with the structure document content for distribution as an SGML file. (DeRose, col. 24, lines 40-46; *see also* generally cols. 22-24.)

CLAIM 20

24. As to claim 20, DeRose discloses a method for producing from a document made up of metacodes and content (e.g., an SGML encoded document), a map of metacodes and their addresses of use (e.g., element directory shown in Fig. 6) in association with mapped content of the document (i.e., text content) and stored in distinct map storage means (e.g., separate file objects in mass storage device 34.) (DeRose, col. 10, lines 59-65, Fig. 8.)

25. DeRose discloses storing the mapped content (i.e., text content of a document), in whole or in part, in the distinct storage means (mass storage device **34**). (DeRose, col. 10, lines 50-59; *see also* col. 12, lines 45-50.)

26. DeRose discloses noting in the map the found metacode and its position in the content (e.g., "put location in element directory entry" block **118** of DeRose, Fig. 8). More specifically, DeRose teaches adding an entry for the metacode in the metacode map, and recording both the previous and next element in the original document. Thus, the position in the content is identified. (DeRose, Figs. 6, 8 and accompanying text.) For example, element **72** lists element **71** as the previous element and **73** as the next element for the tag <TITLE> in the document shown in DeRose, Fig. 4.

27. DeRose discloses parsing the entire document using the above steps. (*See* Fig. 8 and accompanying text.)

28. DeRose discloses "providing" the document as the content of the document (i.e., the text content file on mass storage **34)** separately from the metacode map of the document (i.e., the element directory file on mass storage **34**.) (DeRose, col. 10, lines 50-59.) After the original SGML document has been parsed, the resulting element directory and mapped content can be used to render the document in a variety of formats. (DeRose, col. 12, lines 54-65.) In one example, the document can be provided to a rendering process for "displaying and formatting" as the separate files containing the element directory and text content. (DeRose, col. 17, lines 50-60.)

SNQ #2 Anticipation By Cowan

29. Claims 14-20 are invalid under 35 U.S.C. § 102(b) in view of Cowan as explained in greater detail below and by reference to the claim chart of Appendix B to the Request for Reexamination.

30. Cowan generally describes a system for parsing SGML structured documents into separate data structures (i.e., tree list and line list), such that the user can edit the document structure independently from the document content. Cowan discloses storing these data structures separately and "persistently" (i.e., at least long enough to allow the user to actually edit them, consistent with the Patentee's representations to the District Court) (Markman Tr. 86-98.)

CLAIM 14

31. As to claim 14, Cowan discloses a method for producing a first map of metacodes (e.g, tree list) and their addresses of use (e.g., pointers to a line list of text content) in association with mapped content (text of the document) and stored in distinct map storage means (i.e., a portion of memory for storing a metacode map). More specifically, Cowan discloses an editor for structured documents encoded with the Generalized Markup Language (GML) or the Standardized General Markup Language (SGML). (Cowan, p. 133.) SGML documents are stored on disk with SGML tags embedded inline. (*Id.*) When RITA creates a new document or parses an existing document, it loads a suitable grammar (e.g., an SGML Document Type Definition file) that lists all of the legal metacodes that can appear in an SGML document. (*Id.*) Rita also creates three data storage areas in memory: the "tree list," the "field list" and the "line list." (Cowan, p. 134.) The tree list corresponds to the document structure defined by the metacodes (i.e., SGML markup tags) that are present in the document. (*Id.*) The line list contains the strings of text that comprise the document content. (*Id.*) The field list contains pointers to the text of the document (i.e., the mapped content) where each tag has its effect. (*Id.*) Cowan discloses providing the mapped content (i.e., document text) to mapped content storage means (i.e., a portion of memory storing the line list). More specifically, when an SGML structured document is read from disk (or newly created), the text portion of the document is written into an area of memory that is distinct from the tree list that maintains the document structure. (Cowan, pp. 133-134.)

32. Cowan discloses providing a menu of metacodes. In one mapping, the menu of metacodes is provided by parsing the Document Type Definition file for SGML when RITA is loaded. (Cowan, p. 133) This determines the universe of legal metacodes for parsing a structured document. In another mapping, RITA uses the metacode tags defined by the DTD to generate a user interface menu of legal metacode tags that can be used when editing the structure window. (*See* Cowan, p. 127, *see also generally* "Menu construction," pp. 135-138.) In one illustration, a menu of valid metacodes corresponding to the current insertion document appears at the bottom of the window. (Cowan, Fig. 4.) In another illustration, the user can select a metacode in the structure window and select "Transform," at which point a menu of valid transformation metacodes will appear. (Cowan, p. 131.)

33. Cowan discloses compiling a map of the metacodes (e.g., the tree list) in the distinct storage means (i.e., the portion of memory where the tree list is stored), by locating, detecting and addressing the metacodes. When an old document is edited or a (new document is created), the RITA editor places the tree list in one portion of memory to define the document structure, which is defined (in one example) by SGML tags. (Cowan, p. 134.) The tree list is mapped to the line list (i.e., a data structure that stores the text content of the document) by the field list. (*Id.*) The field list contains pointers to the text on which each metacode has its effect, because it contains a pointer to each tag in the tree list and a corresponding pointer to an entry in the line list. (*Id.*) Since Rita stores the finished document as a flat, tag-embedded ASCII file, this file must be parsed into the tree, field, and line list structures any time that it is opened for editing.

34. Cowan provides the document for editing by the user as separate windows showing the content of the document and the metacode map of the document. (*See, e.g.*, Cowan, Fig. 4). The left hand pane of the user interface window displays the metacode map and may be edited separately from the text content, which is displayed in the right hand pane of the window.

CLAIM 15

35. As to claim 15, Cowan further discloses detecting and locating a multiplicity of metacodes constituting the menu in a document (i.e., using a validating parser). More specifically, Cowan discloses reading the grammar (e.g., GML, SGML) for a particular document from a document class database and that the grammar will be used to constrain the user's input. (Cowan, p. 148.) The grammar, therefore, constitutes the menu of available

metacodes for use in the document. Once the grammar is loaded, Cowan teaches parsing the document to separate the multiplicity of metacodes (SGML tags) from the text content (e.g., creating a field list and a line list). (Cowan, pp. 133-134.)

36. Cowan discloses storing the multiplicity of metacodes (used in a structured document) in the distinct storage means (i.e., a portion of memory containing the tree list). (Cowan, pp. 134, 147.)

37. Cowan discloses detecting and locating mapped content in the document, and storing the mapped content, in whole or in part, in the mapped content storage means. Cowan places the "mapped content" in the line list data structure, and displays the contents of the line list in the right pane of the user interface window. (Cowan, Fig. 4; *see also* p. 134.)

CLAIM 16

38. As to claim 16, Cowan discloses amending the multiplicity of the metacodes to produce a second map. Cowan discloses that the document structure can be edited directly by the user independently of the text content. In one example, Cowan discloses the "Transform" function that can be used to change the metacodes from one type to another, such as changing an "ordered list" to a "simple list." (Cowan, p. 131.) In another example, a group of tags can be cut from one portion of a document and pasted into another portion of the document. (*See generally*, "Structure Editing" pp. 141-143.) The result of either of these operations is a "second map" that is different from the original map.

CLAIM 17

39. As to claim 17, Cowan discloses that metacodes can be description codes. Specifically, Cowan states that RITA can be used to edit SGML structure documents. (Cowan, p. 131.) Indeed, Cowan discloses the same set of metacode tags identified by the '449 Patent, col. 11, lines 31-40. (*Cf.,* SGML Spec., referring to descriptive markup, pp. 68-69.)

CLAIM 18

40. As to claim 18, Cowan discloses comparing the multiplicity of metacodes in the map with a predetermined set of criteria (e.g., the grammar defined by the SGML DTD). A principal purpose for the Rita editor was to generate structured documents that are semantically complete without burdening the user with the need to memorize the internal details of the structured document language (e.g., SGML). (Cowan, pp. 125, 148.) More specifically, Cowan discloses a "validation routine" that checks the document structure (defined by the metacode

map) against the SGML grammar and suggests potential corrections that will result in a grammatically correct structured document that can be saved permanently or sent to a formatting process for printing or display.

CLAIM 19

41. As to claim 19, Cowan discloses applying the first map to the mapped content to provide a differentiated document. Specifically, Cowan teaches that documents are written to hard disk as flat, ASCII files with SGML tags embedded in the content. To reconstitute such a file, the document is "unparsed" by traversing the tree list and writing the SGML tags and text content to the flat file. (Cowan, fn. 5; *see also* p. 133.)

CLAIM 20

42. As to claim 20, Cowan discloses a method for producing from a document made up of metacodes and content, a map of metacodes and their addresses of use in association with mapped content of the document and stored in distinct map storage means (*See generally* the discussion of claim 14 above, incorporated by reference herein).

43. Cowan further discloses step (a) reading the content of the document until a metacode (e.g., SGML tag) is found. "If a complete file is being read, Rita acts in a manner similar to a document formatter or batch compiler." (Cowan, p. 133.) Since Rita stores the finished document as a flat, tag-embedded ASCII file, the file must be parsed into the tree, field, and line list structures any time that it is opened for editing. (*See* Cowan, pp. 133-134.) Further, as an SGML-compatible system, the Rita editor necessarily requires an SGML parser to distinguish between legal SGML tags and the tagged content. (SGML Spec., p. 69.)

44. Cowan further discloses step (b) copying the content and storing the copied content in a mapped content storage (a portion of memory storing the line list). Text content is copied into the line list data structure, and displayed in the right hand pane of the user interface window. (See Cowan, pp. 133-134; *see also* Fig. 4.)

45. Cowan discloses step (c) noting in the map the found metacode and its position in the content. Metacode tags are written into the tree list, and the tags are mapped to the text content in the line list using the field list data structure. (*See* Cowan, pp. 133-134.)

46. Cowan further discloses step (d) repeating the processing of (a)-(c) until the entire document has been processed. Again, Cowan states, "[i]f a complete file is being read, Rita acts

in a manner similar to a document formatter or batch compiler." (Cowan, p. 133.) Accordingly, Cowan discloses processing the entire document.

47. Finally, Cowan discloses providing the document as the content of the document separately from the metacode map of the document. Again, Cowan stores the content of the document in the line list, which is a data structure that is separate from the field list and tree list data structures that comprise the metacode map. The contents of these separate data structures are reflected in the separate panes of the user interface window, an example of which is illustrated in Cowan, Fig. 4.

SNQ #3 Obviousness Over DeRose In View Of Cowan

48. Claims 14-20 are unpatentable under 35 U.S.C. § 103(a) over DeRose in view of Cowan as explained in greater detail below and by reference to the claim charts of Appendix A and Appendix B to the Request for Reexamination.

49. Requester perceives no deficiencies in the teachings of either DeRose or Cowan in anticipating claims 14-20, based upon the claim interpretations that have been advanced by the Patentee in the Litigation. However, to the extent that the examiner determines that either reference lacks an explicit or inherent teaching as to any element of DeRose, such teaching can be found in Cowan (and vice versa).

50. Further, since both Cowan and DeRose describe decomposing an SGML-encoded document that allows a user to edit the structure and content of the document separately, the person of ordinary skill in the art would readily have been motivated to add the features of Cowan in DeRose and vice-versa.

51. According to the Patentee, the person of ordinary skill in the art would generally have a Bachelor of Science in Computer Science or Electrical Engineering as well as 2-3 years of programming experience. (Payne Decl., ¶ 13.)

52. Typical qualifications for a degree in computer science require a course in compilers, which includes the parsing of text files that contain embedded tags or keywords.

CLAIM 14

53. As to claim 14, the disclosure of DeRose and Cowan identified in the above anticipation grounds are incorporated by reference herein.

54. DeRose and Cowan both describe systems and methods for decomposing SGML-encoded documents into a metacode map and mapped content, each of which is then stored in a

separate storage area. DeRose describes that the storage areas are file objects on a hard disk, while Cowan describes data structures in RAM. DeRose further describes storing the decomposed document as separate files in permanent storage. While Cowan discloses reintegrating the content and metacode map into a composite document for permanent storage, Cowan teaches storing the component separately in a persistent manner (that is, at least long enough for the user to be able to edit one or both independently).

55. Both Cowan and DeRose disclose parsing SGML structure documents (which necessarily requires reading the SGML Document Type Definition file to determine the proper grammar (even if such logic is hardcoded, the "menu" has been provided to the system). Cowan further discloses providing a menu of metacodes to the user so that he can select from a list of valid metacodes (rather than all possible codes, some of which might not be syntactically correct at a given insertion point while the document is being edited). To the extent that the Examiner finds that "providing a menu of metacodes" requires displaying a menu of potential metacodes to the user, Cowan discloses constructing a menu of valid metacodes based on the current state of the document being edited, the insertion point, and the SGML grammar. (*See generally*, Fig. 4, bottom pane, and "Menu Construction," beginning at p. 135.)

56. It would have been obvious for the person of ordinary skill in the art in 1994 to combine the teaching of DeRose and Cowan to produce a system that provided a menu of metacodes to the user as explicitly suggested by Cowan. This is further confirmed by the admission of the Patentee's expert in the Litigation: "[t]he use of menus and storage in memory in computer software systems is ubiquitous to software systems, and well-known in the art in 1994." (Payne Decl., ¶ 23.)

57. To the extent that DeRose does not explicitly teach that the user edits the metacode map directly and independently of the mapped content (and assuming that the Examiner believes that this is required by the claim), Cowan does teach this feature. As illustrated in Cowan, Figs. 3 and 4, the left hand pane of the user interface window is the structure pane, and it may be edited by the user independently of the content in the right hand side.

58. It further would have been obvious for the person of ordinary skill in the art to implement the parsing algorithm (as required by the SGML specification), and as explicitly described by DeRose.) (DeRose, Fig. 8.)

59. Any and all of these modifications would have been within the ordinary skill in the art in 1994.

CLAIM 15

60. As to claim 15, the disclosure of DeRose and Cowan identified in the above anticipation grounds are incorporated by reference herein. The obviousness discussion of claim 14 is also incorporated by reference.

61. Claim 15 is dependent on claim 14. To the extent that the Examiner believes that DeRose lacks an element found in claim 14, claim 15 would nevertheless be obvious because both Cowan and DeRose disclose the additional elements of claim 15 as shown in the claim charts.

CLAIM 16

62. As to claim 16, the disclosure of DeRose and Cowan identified in the above anticipation grounds are incorporated by reference herein.

63. To the extent that the Examiner believes that DeRose does not explicitly disclose amending the multiplicity of metacodes to produce a second map, Cowan discloses this element by explicitly providing the ability to transform metacode from one type into another (e.g., "ordered list" to "simple list"); or by explicitly allowing the user to edit the structure map in the left hand side of the user interface window.

64. DeRose acknowledges that most, but not all, source documents may be "read only," which explicitly suggests that documents may be edited. DeRose further discloses the decomposition of structured documents into at least two file objects, as well as detailed ways of annotating documents without modifying the original source. Naturally, it would have been more straightforward to add annotations directly to the original source, which could have been accomplished using the features described by Cowan.

65. The combination of DeRose and Cowan also would have been obvious for the reasons stated in ¶¶ 54-59, above.

CLAIM 17

66. As to claim 17, the disclosure of DeRose and Cowan identified in the above anticipation grounds are incorporated by reference herein. The obviousness discussion of claim 16 is also incorporated by reference.

67. Claim 17 is dependent on claim 16. To the extent that the Examiner believes that DeRose lacks an element found in claims 14-16, claim 17 would nevertheless be obvious because both Cowan and DeRose disclose the additional element of claim 17 as shown in the claim charts.

CLAIM 18

68. As to claim 18, the disclosure of DeRose and Cowan identified in the above anticipation grounds are incorporated by reference herein.

69. To the extent that the Examiner believes that DeRose does not explicitly teach comparing the multiplicity of metacodes in the map with a predetermined set of criteria (for example, validating the syntax of the document), Cowan explicitly teaches reading the SGML grammar (i.e., DTD) from a document class database for the purpose of comparing the metacode map that the user has edited so that the final document conforms to the syntax requirements of the SGML Standard. (Cowan, p. 147.) In this mapping, the "predetermined set of criteria" is the SGML DTD, and the metacode map is that of the newly created (or edited) structure map.

70. Since both DeRose and Cowan discuss manipulating SGML-encoded structured documents, the person of ordinary skill in the art naturally would have been motivated to insure that such documents complied with the standard, so that the resulting documents could be shared with other SGML-compatible tools. Additionally, DeRose specifically suggests the need to provide annotation data to publishers in a "portable representation" such as the SGML format. (*See* DeRose, col. 24, lines 35-46.)

71. The combination of DeRose and Cowan also would have been obvious for the reasons stated in ¶¶ 54-59 above.

CLAIM 19

72. As to claim 19, the disclosure of DeRose and Cowan identified in the above anticipation grounds are incorporated by reference herein.

73. To the extent that the Examiner determines that claim 19 requires that the metacode map and the text content must be re-integrated into a flat, SGML file, and further determines that DeRose does not explicitly teach this re-integration, Cowan does teach "unparsing" the separate metacode map information with the text content because it is less confusing to have a single format for storing SGML documents (i.e., the standard SGML format) so that these documents would be compatible with a wide variety of formatting tools, etc.

74. It further would have been obvious to provide the document in permanent storage as an integrated composite document (as explicitly disclosed by Cowan), by reversing the process described in DeRose, Fig. 8; that is, unparsing the treelist to write a "differentiated document" for export to another SGML tool, such as the Normalizer tools identified in DeRose. Additionally, DeRose specifically suggests the need to provide annotation data to publishers in a "portable representation" such as the SGML format. (*See* DeRose, col. 24, lines 35-46.)

75. The combination of DeRose and Cowan would have been obvious for the reasons stated in ¶¶ 54-59 above, and because the Patentee admitted in the Litigation that structures for comparing values (e.g., metacodes and predetermined criteria) are well-known to persons of ordinary skill in the art. (Payne Decl., ¶ 26.)

CLAIM 20

76. As to claim 20, the disclosure of DeRose and Cowan identified in the above anticipation grounds are incorporated by reference herein. The discussion with respect to the obviousness of claim 14 is also incorporated by reference.

77. The combination of DeRose and Cowan would have been obvious for the reasons stated in ¶¶ 54-59, above.

VI. CONCLUSION

The '449 Patent Applicant did not disclose or claim anything novel or non-obvious over the references cited above.

As demonstrated above, the cited references anticipate or render obvious claims 14-20. Accordingly, Requester asks that that this Request be granted and that claims 14-20 of the '449 Patent be cancelled.

Respectfully submitted,

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