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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	04/17/2007	7206854	D02487	5436

43471 7590 03/28/2007

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 780 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Marc W. Kauffman, Encinitas, CA;
Jonathan Fellows, Del Mar, CA;

Ex.1023
GOOGLE LLC / Page 1 of 321

OIPE MAR 07 2007 PATENT & TRADEMARK OFFICE

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

000043471 7590 12/13/2006

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

03/07/2007 HDEMESS2 00000068 502117 09734220

01 FC:1501 1400.00 DA
02 FC:1504 300.00 DA

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Carol J. Smith (Depositor's name)
Carol J. Smith (Signature)
March 7, 2007 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

TITLE OF INVENTION: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$0	$1700	03/13/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
DUONG, THOMAS	2145	709-231000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Larry T. Cullen 44,489
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: General Instrument Corporation
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Horsham, PA USA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☑ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 502117 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature L. T. Cullen Date 3/7/2007
Typed or printed name Larry T. Cullen Registration No. 44,489

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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PAGE 2/2 * RCVD AT 3/7/2007 10:42:39 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-3/0 * DNIS:2732885 * CSID:2153231300 * DURATION (mm-ss):01-20 TAL P.00



MOTOROLA

FAX TRANSMITTAL SHEET

Motorola, Inc.
Intellectual Property Section
Law Department
101 Tournament Drive
Horsham, PA 19044

Telephone: 215-323-1797
Facsimile: 215-323-1300

2 Number of Pages (including this page)

Date:	March 7, 2007
To:	Examiner: Duong, Thomas Art Unit: 2145
Location:	United States Patent and Trademark Office
Fax No.:	571-273-2885
From:	Attorney: Lawrence T. Cullen Reg. No. 44,489
Subject:	Serial No. 09/734,220 Filed: 12/11/2000 Docket No. D02487

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MESSAGE:

Enclosed herewith, please find Part B – Issue Fee Transmittal and fees due for filing in the above-identified application.

UNITED STATES PATENT AND TRADEMARK OFFICE

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NOTICE OF ALLOWANCE AND FEE(S) DUE

000043471 7590 12/13/2006

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

EXAMINER	
DUONG, THOMAS	
ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 12/13/2006

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

TITLE OF INVENTION: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$0	$1700	03/13/2007

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 07/06) Approved for use through 04/30/2007.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

000043471 7590 12/13/2006

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
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101 TOURNAMENT DRIVE
HORSHAM, PA 19044

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

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(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

TITLE OF INVENTION: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$0	$1700	03/13/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
DUONG, THOMAS	2145	709-231000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☐ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

000043471 7590 12/13/2006

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
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101 TOURNAMENT DRIVE
HORSHAM, PA 19044

EXAMINER	
DUONG, THOMAS	
ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 12/13/2006

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 780 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 780 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 07/06) Approved for use through 04/30/2007.

Notice of Allowability	Application No.	Applicant(s)	
	09/734,220	KAUFFMAN ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2145	

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *September 22, 2006*.

2. ☒ The allowed claim(s) is/are *1 and 3-30*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Patrice L. Winder
PATRICE WINDER
PRIMARY EXAMINER

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Lawrence T. Cullen (Reg. No. 44,489) on December 8, 2006.

3. The application has been amended as follows:

Please cancel *claim 2*.

2. (*Canceled*)

Response to Arguments

4. The Applicants' arguments filed in the Appeal Brief on September 22, 2006 have been fully considered and are persuasive.

Allowable Subject Matter

5. *Claims 1 and 3-30* are allowed. The claims indicated include limitations that the prior arts of record do not appear to teach or render obvious, hence they are allowed.

6. The following is an examiner's statement of reasons for allowance:

As presented in the previous Office Action, Capek et al. (US006094677A) discloses, *"at a minimum, it is expected that the control mechanism will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). Hence, Capek teaches of a control mechanism (i.e., Applicants' switching mechanism) that is capable of inserting alternative media including *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience to the client"* (Capek, col.7, lines 49-52). Capek discloses, *"with reference to FIG. 2, the present invention provides for an insertion manager 20 that implements the present invention in conjunction with an insertion repository 22. In general, the insertion manager 20 detects a request from a client 24 for program material located at a server 26"* (Capek, col.7, lines 17-21). In addition, Capek discloses, *"associated with the insertion manager 20 is the insertion repository 22. The insertion repository 22 includes the insertion data or precursor information that can be used to generate the insertion provided to the client 24"* (Capek, col.7, lines 39-42). Hence, Capek teaches of a multimedia insertion system that includes an insertion manager 20 (i.e., Applicants' control unit), a server 26 (i.e., Applicants' first cache), and an insertion repository 22 (i.e., Applicants' second cache).

However, the prior arts of record fail to teach or suggest individually or in combination as stated in the independent claims for *"wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file."* and in combination with other

limitations as set forth in the independent claims, as well as Applicants' arguments presented on pages 7-17 of the Appeal Brief filed on September 22, 2006.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

December 8, 2006

Jason D. Cardone

Supervisory PE (AU2145)

Patrice Winder

PATRICE WINDER
PRIMARY EXAMINER

for Jason Cardone

Notice of References Cited	Application/Control No. 09/734,220	Applicant(s)/Patent Under Reexamination KAUFFMAN ET AL.	
	Examiner Thomas Duong	Art Unit 2145	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,615,039 B1	09-2003	Eldering, Charles A.	455/418
*	B	US-6,698,020 B1	02-2004	Zigmond et al.	725/34
*	C	US-6,704,930 B1	03-2004	Eldering et al.	725/36
*	D	US-7,146,627 B1	12-2006	Ismail et al.	725/47
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Issue Classification	Application/Control No. 09/734,220	Applicant(s)/Patent under Reexamination KAUFFMAN ET AL.
	Examiner Thomas Duong	Art Unit 2145

ISSUE CLASSIFICATION

ORIGINAL		INTERNATIONAL CLASSIFICATION									
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED				
709	231	G	06	F	15	/16				/	
CROSS REFERENCES						/				/	
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)										
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12/8/06
(Assistant Examiner) (Date)

(Legal Instruments Examiner) (Date)

Patrice L. Winder
PATRICE WINDER
PRIMARY EXAMINER
(Primary Examiner) (Date) 12-8-06

Total Claims Allowed: 29

O.G. Print Claim(s)	O.G. Print Fig.
1	3

☐ **Claims renumbered in the same order as presented by applicant** ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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5	6		36		66		96		126		156		186
6	7		37		67		97		127		157		187
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29	30		60		90		120		150		180		210

Search Notes

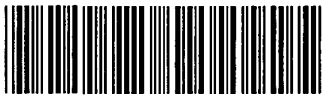
Application/Control No.	Applicant(s)/Patent under Reexamination	
09/734,220	KAUFFMAN ET AL.	
Examiner	**Art Unit**	
Thomas Duong	2145	

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Class	Subclass	Date	Examiner

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner
PGPUB	**History**	12/8/2006	**TD**

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
Please see EAST search history.	12/8/2006	TD

Index of Claims



Application/Control No.	Applicant(s)/Patent under Reexamination
09/734,220	KAUFFMAN ET AL.
Examiner	**Art Unit**
Thomas Duong	2145

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	+	Restricted	I	Interference	O	Objected

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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L3	20	2 and ((independent anywhere) with (insert$6 provide provides providing deliver$6))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/08 15:56
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EAST Search History

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EAST Search History

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S2	6	("5586264" "5761417" "5805821" "5948061" "5996015" "6094677").pn.	USPAT	OR	OFF	2004/05/16 18:28
S3	530	709/231.ccls.	USPAT	OR	OFF	2004/05/16 17:44
S4	8	((stream$6 near6 (media$6 multime$6 audio$6 video$6)) with (alternat$6 with comple$6))	USPAT	OR	OFF	2004/05/16 17:54
S5	2854	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) with (alternat$6))	USPAT	OR	OFF	2004/05/16 17:55
S6	2364	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) near12 (alternat$6))	USPAT	OR	OFF	2004/05/16 17:55
S7	56	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) with (alternat$6 with comple$6))	USPAT	OR	OFF	2004/05/16 17:58
S8	560	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) near12 (alternat$6)) and ((comple$6 same (switch$6 manag$6)))	USPAT	OR	OFF	2004/05/16 18:24
S9	21	("4879849" | "4895376" | "5083271" | "5333272" | "5498003" | "5522018" | "5555354" | "5608850" | "5633993" | "5662526" | "5680524" | "5702307" | "5734805" | "5736982" | "5737619" | "5764912" | "5850225" | "5854897" | "5862337" | "5919045" | "5978841").PN.	USPAT	OR	OFF	2004/05/16 18:06
S10	11	"6094677".URPN.	USPAT	OR	OFF	2004/05/16 18:08
S11	92	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) near12 (alternat$6)) and ((comple$6 same (switch$6 manag$6))) and bill$6	USPAT	OR	OFF	2004/05/16 18:25
S12	4	(("5586264" "5761417" "5805821" "5948061" "5996015" "6094677").pn.) and bill$6	USPAT	OR	OFF	2004/05/16 18:28

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Attorney Docket No.: D2487

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Inventor: Marc W. Kauffman	)	Confirmation No.: 5436
	)	
	)	Customer No.: 000043471
U.S. Serial No.: 09/734,220	)	
	)	Art Unit: 2145
Filed: December 11, 2000	)	
	)	Examiner: Thomas Duong
	)	

Title: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Notification of Non-Compliant Appeal Brief mailed on August 31, 2006, please enter the attached Appeal Brief for consideration.

I. Real Party In Interest

The Real Party in interest is General Instrument Corporation, which is a wholly owned subsidiary of Motorola, Inc.

II. Related Appeals And Interferences

There are no related appeals or interferences which may have a bearing on this case.

III. Status Of Claims

All claims, claims 1-30, stand rejected. The rejections of claims 1-30 are being appealed.

IV. Status Of Amendments

No amendments have been submitted subsequent to the final rejection. All prior amendments have been entered.

V. Summary Of Claimed Subject Matter

The application contains claims 1-30, and claims 1, 2 and 21 are independent claims. Claims 1 and 2 are directed toward different approaches of an arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user. Claim 21 is directed toward a method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user. Each of these claims are discussed below after a brief discussion of background.

As explained in paragraphs [0002 – 0005] of Applicant's published disclosure, streaming media defines the capability to download multimedia files in real time (or "near real" time) and play the file on an end-user device, such as through a set-top box on a television or on a computer display device. Specification, para. [0003]. Prior to Applicant's invention, it was possible to also download advertisements (or other media) to end users once the video or other presented material in the stream is completed. However, these advertisements were limited by the need to "wait" until the end of the program thus limiting the number, as well as the duration of advertisements that can be presented to end users. Hence, there was a need in the art relating to a methodology for inserting data such as advertising in streaming media. Applicant's invention addresses this need by providing a technique for inserting such data at arbitrary locations along the stream.

As mentioned, claim 1 is directed toward an arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user. The arrangement in claim 1 includes a first cache for storing a received alternative media file, which is supported at least by the disclosed "first cache 60" illustrated in Fig. 2 and described in at least paragraph [0024]. The arrangement also includes a second cache for storing a streaming multimedia file, which is supported at least by the disclosed "second cache 62" illustrated in Fig. 2 and described in at least paragraph [0024]. A control unit for receiving as a first input a control signal from the first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in the first cache is also included in the arrangement. The control unit is supported at least by "control unit

66" illustrated in Fig. 2 and described in at least paragraph [0024]. The arrangement also includes a switching mechanism, coupled to each one of the control unit, the first cache, the second cache and the streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of the first cache, the streaming multimedia file and the second cache, as controlled by the switching output signal from the control unit so as to insert the alternative media file in the stream. The switching unit and its operation is illustrated in Fig. 2 and described in at least paragraph [0024]. The limitation of "wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file" corresponds to the discussion in at least paragraph [0023] in which Applicant's explain that in one embodiment, the multimedia stream may begin to reach the user before an advertisement is inserted. As explained, at some point along the playing of the file, an advertisement is inserted as segment 54 and the remainder of the multimedia stream, represented as segment 56, is appended to the end of the advertisement. Para. [0023].

As mentioned, claim 2 is directed toward an arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user. The arrangement in claim 2 differs from claim 1, but similarly comprises: a first cache for storing a received alternative media file; a second cache for storing a streaming multimedia file; a control unit for receiving as a first input a control signal from the first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in the first cache; and a switching mechanism, coupled to each one of the control unit, the first cache, the second cache and the streaming multimedia file for providing as an

output, directed to the at least one end-user, a stream selected from one of the first cache, the streaming multimedia file and the second cache, as controlled by the switching output signal from the control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file. However, in the arrangement of claim 2, the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit. This feature is supported at least by the discussion in paragraph [0024] which states "When control unit 66 receives a particular indication from first cache 60 (such as "EOF" received), it knows that advertisement stream A is ready to be played out and multimedia stream MM can be held. A signal is then sent from timing and control unit 66 to switch 67, requesting the switch to move to position (2), allowing the cached advertisement stream A to be sent to end-user 10." Para. [0024].

Claim 21 is directed toward a method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user. Claim 21 includes a step of storing a selected alternative multimedia file in a first cache at a local point of presence, which is supported at least by the discussion of the disclosed "first cache 60" illustrated in Fig. 2 and described in at least paragraph [0024]. The method also includes a steps of establishing a communication link between said streaming multimedia file and said predetermined end-user, and transmitting said streaming media file to said end-user, which are supported at least by Figs. 1 and 2. The method also includes the steps of switching transmission from said streaming multimedia file to said alternative media file stored in said first cache, storing in a second cache said streaming multimedia file

received during the transmission of said alternative media file, and upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file, which are supported at least by the discussion provided in paragraph [0024 of Applicant's published application ("A signal is then sent from timing and control unit 66 to switch 67, requesting the switch to move to position (2), allowing the cached advertisement stream A to be sent to end-user 10. Once this process begins, multimedia stream MM will begin to be stored in second cache 62. When timing and control unit 66 receives a command that the end of the advertisement has been reached, a signal to move switch 67 to position (3) will be sent, allowing the cached multimedia stream to be sent to end-user 10."). The limitation of "wherein the alternative media file is inserted in the streaming multimedia independent of boundaries of the multimedia file" is supported at least by the discussion in at least paragraph [0023] in which Applicant's explain that in one embodiment, the multimedia stream may begin to reach the user before an advertisement is inserted. As explained in paragraph [0023], at some point along the playing of the file, an advertisement is inserted as segment 54 and the remainder of the multimedia stream, represented as segment 56, is appended to the end of the advertisement. Para. [0023].

VI. Grounds Of Rejection To Be Reviewed On Appeal

A. Rejection of claims 1 and 3-30 under 35 U.S.C. § 102.

B. Rejection of claim 2 under 35 U.S.C. § 102.

VII. Argument

A. Capek Does Not Disclose To Insert An Media File In A Multimedia Stream Independent Of Boundaries Of The Multimedia File As Recited In Claims 1 And 21

Claims 1-30 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Capek et al. (U.S. Pat. 6,094,677).

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1380 (Fed. Cir. June 2006) "a claim is anticipated under 35 U.S.C. § 102 'if each and every limitation is found either expressly or inherently in a single prior art reference'" citing, *Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc*., 246 F.3d 1368, 1374 (Fed. Cir. 2001). See also, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986); *Connell v. Sears, Roebuck & Co.*, 220 USPQ 193, 198 (Fed. Cir. 1983).

Capek does not disclose or suggest a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file in the stream, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file, as recited by claim 1. Capek also does not disclose d) switching transmission from said streaming multimedia file to said alternative media file stored in said first cache, e) storing in a second cache said streaming multimedia file received during the transmission of said alternative media file;

and f) upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file, wherein the alternative media file is inserted in the streaming multimedia independent of boundaries of the multimedia file, as recited by claim 21. More particularly, Capek does not disclose at least the limitation in the clause "wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file," as substantially recited by each of claims 1 and 21.

Capek discloses to use an insertion manager 20 to provide an insert from an insertion repository 22 to a client 24 device during a delay of receiving requested data from a server 26. See. Capek, Title, Abs., Figs. 1, and 4A and 4B. Capek is concerned with reducing delays between the client and a server containing the content of an ad, *i.e.* delays in retrieving the ad from the server. See, Figs. 4A and 4B; col. 7: 16-25. Capek clearly explains that the procedure in Fig. 4A is prior art to Capek, and Fig. 4B, in which the insertion manager provides an advertisement from its repository to the client when a certain delay has passed is the contribution to the art of Capek. See, Figs. 2, 4A and 4B; col. 10: 29-68 ("referring to FIG. 4A which does not implement the present invention" …. With the present invention, as illustrated in FIG. 4B"). In both Fig. 4A and 4B, the process is initiated by a request from the client, at time A, which also initiates the "dead time" time periods in the media stream, *i.e.* a break in the media stream. See, Figs. 4A and 4B. The time period for providing the advertisement to the client in Capek is clearly disclosed as being initiated by a break in the streaming media to initiate the "dead time", *i.e.* time period A, and clearly not "independent of boundaries of the multimedia file." Capek even touts making inserts during a delay period.

1. Capek Touts Making Inserts During Delays In Receiving Files From A Server

Capek repeatedly touts its disclosure as providing inserts during a delay in receiving a file from server 26. A few of the excerpts are as follows:

Capek, col. 6: 66 through col. 7: 16

> The present invention takes advantage of ***retrieval delays in interactive systems*** by providing informative and/or engaging information in a format suitable for the type of interactive system in which the present invention is operating. For instance, a web page may be provided to a user ***waiting for a home page of a particular web site to download*** in the context of the WWW. Likewise, a video/audio clip may be provided to a person ***waiting for the presentation of a selected movie*** in the context of on-demand television. Further, the information provided to the user ***during the delay*** may be customized for the user to increase the users interest and to make the information more engaging.

Capek, col. 10: 29-37:

> Accordingly, the present invention is able to provide an insertion of customized information to a client ***during the retrieval*** of requested program materials ***which, without the present invention, will be perceived as dead time to the client 24***. This is graphically illustrated in FIGS. 4A and 4B which show the timing relationship between a system that does not implement the present invention (FIG. 4A) and a system which does implement the present invention (FIG. 4B).

Capek goes on to explain that providing inserts during the retrieval delay as being "advantageous because it eliminates the frustration and annoyance users often experience when waiting for requested program material to be downloaded in distributed interactive systems." Capek, col. 7: 10-14.

2. Capek Defines An Insert As Provided During Delays

Capek even defines the term "insert or insertion" as used in its disclosure as "information provided to the user during the delays." See, Capek, col. 7: 14-16 ("for purposes of the present disclosure, the information provided to the user during the delays is referred to hereinafter as an insert or insertion"). Clearly, one of skill in the art would understand that Capek discloses to provide inserts to a client during delays in retrieving files from a server. Yet, in spite of numerous statements in Capek, the Examiner interprets Capek to actually disclose to provide inserts independently of boundaries in a multimedia file.

3. The Examiner's Conclusions Are Misplaced

The Examiner attempts to refute the plain statements provided in the Capek reference itself with micro-analyzing various individual sentences in Capek, without apparent regard for their context or intended subject. Particularly, in the Final Office action, the Examiner points to col. 9: 13-16, in the Advisory Action, the Examiner points to col. 5: 14-16, 20-22 and 41-52; col. 7: 49-52; col. 9: 6-24; col. 10: 18-28 and lines 1-67. None of the portions cited by the Examiner remotely suggest to provide an "insert" independent of the boundaries of a streaming media file. Apparently recognizing this, the Examiner strings together selected sentences from disparate parts of the disclosure and juxtaposes them in a manner to attempt to rationalize away from the expressed statements of intent in Capek. See, Advisory Action, pp. 4-5. However, such rationalization, no matter how creative cannot be a substitute for actual disclosure, nor can it refute what is actually disclosed by Capek.

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a. The Examiner's Rationalization Is Not Supported By Capek

The Examiner's latest rationalization provided in an Advisory Action is as follows with indicators (denoted by "Points 1-6" and "Conclusion") provided by Applicant in bold for discussion:

> wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file. (Capek, co1.5, lines 20-22, lines 41-52; co1.7, lines 49-52; co1.9, lines 6-24; col. 10, lines 18-28; col.10, lines 1-67). **Point 1** Capek includes a control mechanism that "will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server" (Capek, co1.9, lines 11-13). **Point 2** In other words, Capek's control mechanism will replace the insertion data, which may be "text, graphics, animation, motion video, sound, etc" as well as "the combination of data having different formats into a single insertion for providing a multimedia experience" (Capek, co1.7, lines 49-52), with the requested material once it is available. **Point 3** According to Capek, the control logic's function is to "replaces the insertion with the requested program material after the program is retrieved" (Capek, co1.5, lines 20-22). **Point 4** Also, the "insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client" (Capek, col.10, lines 18-27). **Point 5** In addition, Capek teaches "wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time may alternatively be based upon the amount of time required to retrieve the information from the second computer" (Capek, co1.5, lines 41 -52). **Conclusion** Hence, Capek teaches of inserting the alternate media file into the multimedia stream regardless of the stream since (**Point 6**) the insertion, as "a complete insertion or elements of an insertion that can be used to generate a complete insertion dynamically" (Capek, co1.5, lines 14-1 6) can be done while waiting for the retrieval of requested stream (*i.e.*, ***during a network delay in the middle of transmitting the multimedia perhaps***), before the transmission of the multimedia altogether, etc.

Advisory Action, pp. 4-5.

Regarding Point 1, while the Examiner seems to make much out of the fact that an insert is replaced by a program which was requested and retrieved, one would normally expect that the user may actually want to access to their requested program rather than the insert imposed upon them. In this regard, the insert is still provided to the user in the retrieval delay period and then ended when the retrieval delay period ends, a.k.a. when the requested program is provided. The process of providing the insert is clearly dependent on the boundaries of the retrieved program. Moreover, the control mechanism is utilized by the client, and "is delivered to the client as a part of the insertion" and "can enable the client to interact with and control the insertion," as stated by Capek in the first sentences of the paragraph from which the Examiner takes the quoted passage. The control mechanism is discussed in more detail below. In any event, this cited portion clearly corresponds with the statements in Capek that the insertion is provided during a retrieval delay period.

Regarding Point 2, whether the insertion is "text, graphics, animation … etc." merely pertains to the content of the insertion. The content and format of the insertion is largely irrelevant to the manner of inserting the insertion in a data stream with respect to a multimedia file. In other words, the insertion is still provided in the retrieval delay time, whatever its content or format. See, Capek, col. 7: 47-65.

As to Point 3, the control logic's function is to allow the client to control how to interact with the insertion. The discussion of the control logic is provided in greater detail herein below. Of course, the user would naturally desire to eventually replace the insertion with the program which they requested. Again, the ability for the client to

control its interaction with the insertion still does not depart from providing the insertion in a retrieval delay time as disclosed in Capek.

As to Point 4, the Examiner is partially describing the operation of providing the insertion in the delay period for retrieving a selected program from a server. This passage, when reasonably construed, clearly indicates that the insertion is not provided independent of the boundaries of the requested program, rather only before the requested program is provided. For example, in the same paragraph as the quoted passage, Capek states "the insertion manager 20 may make a determination of whether the delay in retrieving the program material is sufficiently long to justify retrieving an insertion and sending the insertion to the client 24 for presentation." Capek, col. 9: 57-61. Capek contemplates not sending an insertion at all if the delay is insufficient. Capek, col. 9: 61-66. Capek also recognizes that determining whether an upcoming retrieval delay is long enough may require estimation, such as being based on historical knowledge. Capek, col. 9: 66 through col. 10:13. As to the particular citation quoted by the Examiner, Capek proposes to buffer the requested program material to effectively extend the delay period so that the insert may be provided to the client, then the buffered material is provided to the client at an increased transmission rate so that the program material arrives to the client as if it were not buffered. Capek, col. 10: 13-20. Clearly, buffering the requested program material merely extends the delay period in which an insertion may be provided, *i.e.* the insertion is still provided in the delay period, and not independent of the boundaries of the program material. Perhaps most telling, the sentence immediately following the discussion of buffering the program material touts the disclosure of Capek as being "able to provide an insertion … during the retrieval of requested program

materials which, without the present invention, will be perceived as ***dead time*** to the client 24." Capek, col. 10: 29-33.

Point 5 is again referring to the buffering of the requested program material, but the Examiner merely quotes to the Summary Of The Invention section rather than rely on the more detailed description of this operation in the Detailed Description section. Again, buffering the retrieved program material ("the transmission of the retrieved application may … be preceded by waiting a preselected period of time") merely extends the delay period to allow the insertion to be provided. The insertion is still transmitted in the delay period prior to transmitting the requested program, *i.e.* not independent of the boundaries of the requested program.

As to the Examiner's Conclusion, it is completely unsupported and even contradicted by the express statements of Capek and reasonable interpretations of the portions of Capek cited by the Examiner. Moreover, it is not entirely clear if the proceeding points 1-5 on the previous page of discussion were intended to support this conclusion or if Point 6 is intended to support the conclusion itself.

As to Point 6, the Examiner appears to attempt to may hay out of the mere existence of the dynamically created insertion. However, Capek does not disclose to transmit a dynamically created insertions (which is presumably created by the insertion manager) any differently than a completed insertion. See, col. 7: 39-47 ("the insertion data may be elements of an insertion that may be dynamically combined ***to create an insertion that can be sent to the client***"). Certainly, there is nothing in Capek which supports the Examiner's conclusion that a dynamic insertion can be "completed" "during a network delay in the middle of transmitting the multimedia perhaps." Advisory Action,

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pp. 4-5. Indeed, the statement is nothing more than blatant speculation fueled by the imagination of the Examiner, perhaps. Such self created disclosure clearly cannot satisfy a basis for anticipation under 35 U.S.C. § 102. There is simply nothing in Capek which suggests that the "dynamically completed insertion" is provided to the client at any time other than a retrieval delay, and the Examiner cites to nothing to support such allegation.

Clearly, none of the portions cited by the Examiner disclose or suggest to insert an alternative media file in a stream independent of boundaries of a multimedia file, and the Examiner's conclusions are unsupported and contradicted by the disclosure of Capek.

b. The control mechanism does not control when the insertion is inserted into the data stream

The Examiner heavily relies on the "control mechanism" to attempt to meet Applicant's claims. The control mechanism is described in detail in col. 9: 6-24 of Capek, with bold and italics added by Applicant for emphasis:

> The insertions may include a control mechanism ***that is delivered to the client as a part of the insertion***. The control mechanism preferably comprises programming or specifications ***that can enable the client to interact with and control the insertion***. At a minimum, it is expected that the control mechanism will provide for the replacement of the insertion by the requested program material ***once the program material is received from the distributed server***. Other functionality that may be provided by the control mechanism include the dismissal of a particular insertion or the discontinuance of insertions in general. The control mechanism may take any number of forms depending upon the technology supported by the network 28. For instance, in some hypermedia systems the control mechanism may be nothing more than a parameter which requires the client 24 to re-request the requested program material after it has been presented with an insertion. Other hypermedia systems may support actual executable instructions that provide control of the hypermedia system, and more particularly, the insertion.

The Final Office action relies on the statement in Capek that that "other functionality that may be provided by the control mechanism include the dismissal of a particular insertion or the discontinuance of insertions in general" (Capek, col. 9: 13-16). Based on the statement, the Examiner concluded that "it is clear that Capek anticipates of a situation where the insertion manager interrupts or ceases the insertion in order to deliver the requested material to the user." Final Office action, pg. 10.

However, the paragraph found in col. 9: 6-24 merely discusses a "control mechanism that is delivered to the client as a part of the insertion." Capek, col. 9, 6-7. Clearly, as the control mechanism is delivered with the insertion, it does not control when the insertion is inserted into the data stream, *i.e.* when it is delivered to the client. Rather, as clearly described in Capek, the control mechanism is used by the client to "enable ***the client*** to interact with and control the insertion." Capek, col. 9: 7-10. The insertion must clearly already have been received by the client (a.k.a. a personal computer 14) to be controlled by the client, *i.e.* the client's control of the insertion held by the client has no affect on the structure or contents of a data stream provided to the client. Moreover, if the insertion were interrupted when a requested program is received by the client, as concluded by the Examiner, such would clearly indicate that the insertion is <u>not</u> provided independent of the boundaries of a multimedia file.

Again, Capek defines an "insertion" as something which is provided during a delay in retrieving requested data from a server. Capek even provides an example of providing the client with an audio insertion while waiting to retrieve a web page and allowing the client to listen to the audio insertion after the web page is received and being viewed by the client. Capek, col. 7: 58-65 ("the audio message may continue to play to

its end without premature termination even though the web page may have been retrieved and is being presented simultaneously to the user"). Clearly, the "control mechanism" merely provides ***the client*** the ability to control its own interaction with the insertion (*e.g.* viewing or listening), it does not control when or in what manner the insertion is provided in the data stream provided to the client. Clearly, the Examiner's reliance on the "control mechanism" is misplaced.

As Capek does not disclose or suggest each and every element of amended claims 1 and 21 Capek does not anticipate amended claims 1 and 21. Likewise, as claims 3-20 and 22-30 depend on amended claims 1 and 21 respectively, and contain all of the limitations thereof, Capek also does not anticipate claims 3-20 and 22-30. Accordingly, Applicant respectfully request the rejections of claim 1 and 3-30 to be reversed.

B. Capek Does Not Disclose A Control Signal As Recited In Claim 2

Claims 1-30 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Capek et al. (U.S. Pat. 6,094,677).

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1380 (Fed. Cir. June 2006) ("a claim is anticipated under 35 U.S.C. § 102 'if each and every limitation is found either expressly or inherently in a single prior art reference'" citing, *Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc.*, 246 F.3d 1368, 1374 (Fed. Cir. 2001). See also, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986); *Connell v. Sears, Roebuck & Co.*, 220 USPQ 193, 198 (Fed. Cir. 1983).

Capek does not disclose an arrangement for inserting an alternative media file into a streaming multimedia file which includes a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file, wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit, as recited by claim 2. More particularly, Capek does not disclose at least the limitations recited in the clause "wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit," as recited by claim 2

As discussed above, Capek discloses to use an insertion manager 20 to provide an insert from an insertion repository 22 to a client 24 device during a delay of receiving requested data from a server 26. See. Capek, Title, Abs., Figs. 1, and 4A and 4B. The Examiner repeats the tactic of stringing together text segments from disparate parts of the disclosure of Capek in an attempt to rationalize an imaginary existence of Applicant's control signal in Capek. In summary of the Examiner's comments, the Examiner

interprets Capek's disclosed "control mechanism" to satisfy Applicant's claimed "control signal." See, Advisory Action, pp. 8-10 ("Capek includes a control mechanism that 'will provide for replacement of the insertion …"). However, other than containing the word "control" Capek's "control mechanism" has nothing in common with Applicant's claimed control signal.

As discussed above, Capek's "control mechanism" is provided to the client within an insert, and is to be used by the client to control their interaction with the insert. See, Capek, col. 9: 6-24 ("The insertions may include a control mechanism ***that is delivered to the client as a part of the insertion***. The control mechanism preferably comprises programming or specifications ***that can enable the client to interact with and control the insertion***."). There is no suggestion in Capek of using a control signal that "indicates that a complete alternative file is stored and is ready for transmission" as recited by claim 2.

As to the specifics of the Examiner's arguments presented in the Advisory Action, there is no suggestion in Capek that the "control mechanism" control the content of the insert, as the Examiner now seems to suggest ("In other words, Capek's control mechanism will replace the insertion data, which may be text, graphic, animation … (Capek col. 7: 49-52)"). Advisory Action, pg. 9. There is also no suggestion in Capek that the "control mechanism" controls the timing in which an insert is made in a data stream, as the Examiner now seems to suggest by his juxtaposition of selected sentences discussing the control mechanism from the Summary of The Invention (col. 5: 20-22) with the portion of the Detailed Description discussing the timing of the inserts (col. 10: 18-27). See, Advisory Action, pp. 9-10 ("According to Capek, the control logic's function is to 'replace the insertion … (Capek, col. 5: 20-22). Also, the "insertion

manager may then make a determination of how long to provide the insertion … (Capek, col. 10: 18-27)"). The approximately column and one half discussion of the timing of placing the insert in the data stream Capek (Capek, col. 9: 54 through col. 10: 67) does not mention the term "control mechanism" at all. In short, the Examiner's argument is nothing more than a tactic of juxtapositioning selected sentences to create an appearance of disclosure by Capek. It is tactics like these that give rise to the simple maxim of the legal requirements of anticipation – either the reference discloses all of the claimed features or not, an argument, no matter how eloquent, creative or exhaustive is not a substitute for disclosure. See, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1380 (Fed. Cir. June 2006) "anticipation is a question of fact." citing *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1220 (Fed. Cir. 2003).

As Capek does not disclose each and every limitation of claim 2, Applicant respectfully request the rejection of claim 2 to be reversed.

VIII. Claims Appendix

A copy of the claims under appeal is presented in the attached Claims Appendix.

IX. Evidence Appendix

None. No additional evidence is relied upon and no additional evidence is presented in an Evidence Appendix.

X. Related Proceeding Appendix

None.

XI. Conclusion

Based on the foregoing, Applicant respectfully requests reversal of the rejections and allowance of the above claims. Should any issues arise that prevent early allowance of the above application, the examiner is invited contact the undersigned to resolve such issues.

To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Respectfully submitted,

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Claims Appendix

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1. *(Previously presented)* An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and

a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file in the stream,

wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.

2. *(Previously presented)* An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

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a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and

a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file,

wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit.

3. *(original)* The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that an alternative file is available to be streamed to said first cache from an external server and is ready to begin transmission to the predetermined at least one end-user.

4. *(original)* The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.

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5. *(original)* The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the cached alternative file stored in said first cache in response to a signal from the control unit that an alternative file is ready to transmit.

6. *(previously presented)* The arrangement as defined in claim 1 wherein the control signal input to said control unit indicates that the alternative media file transfer to the predetermined at least one end-user is completed, the control unit thereafter supplying a switching output signal to said switching mechanism requesting said switching mechanism to supply as the output the cached streaming multimedia file from the second cache.

7. *(original)* The arrangement as defined in claim 1 wherein the arrangement further comprises a billing system coupled to the control unit for receiving information from said control unit regarding the identity of each alternative media file transmitted, the identity of the at least one end-user, and related statistics regarding the transmission of various alternative media files to a plurality of different end-users.

8. *(previously presented)* The arrangement as defined in claim 7 wherein the related statistics include the number of times each alternative media file was requested during a predetermined period of time.

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9. *(previously presented)* The arrangement as defined in claim 7 wherein the related statistics includes the time of day and date that each alternative media file was requested.

10. *(original)* The arrangement as defined in claim 1 wherein the alternative file is defined as an advertisement file.

11. *(original)* The arrangement as defined in claim 1 wherein the alternative file is defined as an emergency information file.

12. *(original)* The arrangement as defined in claim 1 wherein the arrangement is disposed at a local point of presence in a communication network.

13. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed at a headend location in an HFC communication network.

14. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a wide area data network and a local distribution network.

15. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and a DSL communication network.

16. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and wireless communication network.

17. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed in a communications device at an end-user location.

18. *(original)* The arrangement as defined in claim 17 wherein the communications device comprises a set-top box.

19. *(original)* The arrangement as defined in claim 17 wherein the communications device comprises a residential gateway device.

20. *(original)* The arrangement as defined in claim 1 wherein the arrangement further comprises a rule server for retrieving information related to the predetermined at least one end-user and selecting the alternative media file based on said retrieved information and the specific content of the streaming multimedia file.

21. *(Previously presented)* A method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user, the method comprising the steps of:

a) storing a selected alternative multimedia file in a first cache at a local point of presence;

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b) establishing a communication link between said streaming multimedia file and said predetermined end-user;

c) transmitting said streaming media file to said end-user;

d) switching transmission from said streaming multimedia file to said alternative media file stored in said first cache;

e) storing in a second cache said streaming multimedia file received during the transmission of said alternative media file; and

f) upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file,

wherein the alternative media file is inserted in the streaming multimedia independent of boundaries of the multimedia file.

22. *(original)* The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) receiving a request from a predetermined end-user for a streaming multimedia file;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

23. *(original)* The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) detecting the start of a streaming multimedia flow;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

24. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.

25. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the beginning of said multimedia file.

26. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the end of said multimedia file.

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27. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at any location during transmission of said multimedia file.

28. *(original)* The method as defined in claim 21 wherein in performing step d), providing transition segments between the streaming multimedia file and the alternative file.

29. *(original)* The method as defined in claim 28 wherein the transition segments provide "fade in" and "fade out" between said files.

30. *(previously presented)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file based on a timing signal embedded in said streaming multimedia file.

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Electronic Acknowledgement Receipt

EFS ID:	1215202
Application Number:	09734220
Confirmation Number:	5436
Title of Invention:	Seamless arbitrary data insertion for streaming media
First Named Inventor:	Marc W. Kauffman
Customer Number:	43471
Filer:	Larry Tim Cullen
Filer Authorized By:	
Attorney Docket Number:	D02487
Receipt Date:	22-SEP-2006
Filing Date:	11-DEC-2000
Time Stamp:	15:04:55
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
1	Supplemental Appeal Brief	D02487_revised_Appeal_brf.pdf	215307	no	30

Warnings:	
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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

43471 7590 08/31/2006

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
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EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 08/31/2006

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

Notification of Non-Compliant Appeal Brief (37 CFR 41.37)	Application No.	Applicant(s)	
	09/734,220	KAUFFMAN ET AL.	
	Examiner	Art Unit	
	THOMAS DUONG	2145	

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

The Appeal Brief filed on *18 August 2006* is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file anamended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.**

1. ☒ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.

2. ☐ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).

3. ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).

4. ☐ (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).

5. ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi))

6. ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).

7. ☒ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).

8. ☒ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).

9. ☒ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).

10. ☐ Other (including any explanation in support of the above items):

1. Brief does not contain required items under 37 CFR 41.37 (c) (1) . Headings ix & x are missing.
8. Evidence appendix section is missing and must include copies of evidence or an indication of None or Not Applicable.
9. Related proceedings appendix section is missing and must include copies of decision by court or Board of Appeals or an indication of None or Not Applicable.

Tracey M Young
Patent Appeals Specialist

Attorney Docket No.: D2487

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Inventor: Marc W. Kauffman	)	Confirmation No.: 5436
	)	
	)	Customer No.: 000043471
U.S. Serial No.: 09/734,220	)	
	)	Art Unit: 2145
Filed: December 11, 2000	)	
	)	Examiner: Thomas Duong
	)	

Title: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I. Real Party In Interest

The Real Party in interest is General Instrument Corporation, which is a wholly owned subsidiary of Motorola, Inc.

II. Related Appeals And Interferences

There are no related appeals or interferences which may have a bearing on this case.

III. Status Of Claims

All claims, claims 1-30, stand rejected. The rejections of claims 1-30 are being appealed.

IV. Status Of Amendments

No amendments have been submitted subsequent to the final rejection. All prior amendments have been entered.

V. Summary Of Claimed Subject Matter

The application contains claims 1-30, and claims 1, 2 and 21 are independent claims. Claims 1 and 2 are directed toward different approaches of an arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user. Claim 21 is directed toward a method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user. Each of these claims are discussed below after a brief discussion of background.

As explained in paragraphs [0002 – 0005] of Applicant's published disclosure, streaming media defines the capability to download multimedia files in real time (or "near real" time) and play the file on an end-user device, such as through a set-top box on a television or on a computer display device. Specification, para. [0003]. Prior to Applicant's invention, it was possible to also download advertisements (or other media) to end users once the video or other presented material in the stream is completed. However, these advertisements were limited by the need to "wait" until the end of the program thus limiting the number, as well as the duration of advertisements that can be presented to end users. Hence, there was a need in the art relating to a methodology for inserting data such as advertising in streaming media. Applicant's invention addresses this need by providing a technique for inserting such data at arbitrary locations along the stream.

As mentioned, claim 1 is directed toward an arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user. The arrangement in claim 1 includes a first cache for storing a received alternative media file, which is supported at least by the disclosed "first cache 60" illustrated in Fig. 2 and described in at least paragraph [0024]. The arrangement also includes a second cache for storing a streaming multimedia file, which is supported at least by the disclosed "second cache 62" illustrated in Fig. 2 and described in at least paragraph [0024]. A control unit for receiving as a first input a control signal from the first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in the first cache is also included in the arrangement. The control unit is supported at least by "control unit

66" illustrated in Fig. 2 and described in at least paragraph [0024]. The arrangement also includes a switching mechanism, coupled to each one of the control unit, the first cache, the second cache and the streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of the first cache, the streaming multimedia file and the second cache, as controlled by the switching output signal from the control unit so as to insert the alternative media file in the stream. The switching unit and its operation is illustrated in Fig. 2 and described in at least paragraph [0024]. The limitation of "wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file" corresponds to the discussion in at least paragraph [0023] in which Applicant's explain that in one embodiment, the multimedia stream may begin to reach the user before an advertisement is inserted. As explained, at some point along the playing of the file, an advertisement is inserted as segment 54 and the remainder of the multimedia stream, represented as segment 56, is appended to the end of the advertisement. Para. [0023].

As mentioned, claim 2 is directed toward an arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user. The arrangement in claim 2 differs from claim 1, but similarly comprises: a first cache for storing a received alternative media file; a second cache for storing a streaming multimedia file; a control unit for receiving as a first input a control signal from the first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in the first cache; and a switching mechanism, coupled to each one of the control unit, the first cache, the second cache and the streaming multimedia file for providing as an

output, directed to the at least one end-user, a stream selected from one of the first cache, the streaming multimedia file and the second cache, as controlled by the switching output signal from the control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file. However, in the arrangement of claim 2, the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit. This feature is supported at least by the discussion in paragraph [0024] which states "When control unit 66 receives a particular indication from first cache 60 (such as "EOF" received), it knows that advertisement stream A is ready to be played out and multimedia stream MM can be held. A signal is then sent from timing and control unit 66 to switch 67, requesting the switch to move to position (2), allowing the cached advertisement stream A to be sent to end-user 10." Para. [0024].

Claim 21 is directed toward a method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user. Claim 21 includes a step of storing a selected alternative multimedia file in a first cache at a local point of presence, which is supported at least by the discussion of the disclosed "first cache 60" illustrated in Fig. 2 and described in at least paragraph [0024]. The method also includes a steps of establishing a communication link between said streaming multimedia file and said predetermined end-user, and transmitting said streaming media file to said end-user, which are supported at least by Figs. 1 and 2. The method also includes the steps of switching transmission from said streaming multimedia file to said alternative media file stored in said first cache, storing in a second cache said streaming multimedia file

received during the transmission of said alternative media file, and upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file, which are supported at least by the discussion provided in paragraph [0024 of Applicant's published application ("A signal is then sent from timing and control unit 66 to switch 67, requesting the switch to move to position (2), allowing the cached advertisement stream A to be sent to end-user 10. Once this process begins, multimedia stream MM will begin to be stored in second cache 62. When timing and control unit 66 receives a command that the end of the advertisement has been reached, a signal to move switch 67 to position (3) will be sent, allowing the cached multimedia stream to be sent to end-user 10."). The limitation of "wherein the alternative media file is inserted in the streaming multimedia independent of boundaries of the multimedia file" is supported at least by the discussion in at least paragraph [0023] in which Applicant's explain that in one embodiment, the multimedia stream may begin to reach the user before an advertisement is inserted. As explained in paragraph [0023], at some point along the playing of the file, an advertisement is inserted as segment 54 and the remainder of the multimedia stream, represented as segment 56, is appended to the end of the advertisement. Para. [0023].

VI. Grounds Of Rejection To Be Reviewed On Appeal

A. Rejection of claims 1 and 3-30 under 35 U.S.C. § 102.

B. Rejection of claim 2 under 35 U.S.C. § 102.

VII. Argument

A. Capek Does Not Disclose To Insert An Media File In A Multimedia Stream Independent Of Boundaries Of The Multimedia File As Recited In Claims 1 And 21

Claims 1-30 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Capek et al. (U.S. Pat. 6,094,677).

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1380 (Fed. Cir. June 2006) "a claim is anticipated under 35 U.S.C. § 102 'if each and every limitation is found either expressly or inherently in a single prior art reference'" citing, *Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc.*, 246 F.3d 1368, 1374 (Fed. Cir. 2001). See also, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986); *Connell v. Sears, Roebuck & Co.*, 220 USPQ 193, 198 (Fed. Cir. 1983).

Capek does not disclose or suggest a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file in the stream, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file, as recited by claim 1. Capek also does not disclose d) switching transmission from said streaming multimedia file to said alternative media file stored in said first cache, e) storing in a second cache said streaming multimedia file received during the transmission of said alternative media file;

and f) upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file, wherein the alternative media file is inserted in the streaming multimedia independent of boundaries of the multimedia file, as recited by claim 21. More particularly, Capek does not disclose at least the limitation in the clause "wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file," as substantially recited by each of claims 1 and 21.

Capek discloses to use an insertion manager 20 to provide an insert from an insertion repository 22 to a client 24 device during a delay of receiving requested data from a server 26. See. Capek, Title, Abs., Figs. 1, and 4A and 4B. Capek is concerned with reducing delays between the client and a server containing the content of an ad, *i.e.* delays in retrieving the ad from the server. See, Figs. 4A and 4B; col. 7: 16-25. Capek clearly explains that the procedure in Fig. 4A is prior art to Capek, and Fig. 4B, in which the insertion manager provides an advertisement from its repository to the client when a certain delay has passed is the contribution to the art of Capek. See, Figs. 2, 4A and 4B; col. 10: 29-68 ("referring to FIG. 4A which does not implement the present invention" …. With the present invention, as illustrated in FIG. 4B"). In both Fig. 4A and 4B, the process is initiated by a request from the client, at time A, which also initiates the "dead time" time periods in the media stream, *i.e.* a break in the media stream. See, Figs. 4A and 4B. The time period for providing the advertisement to the client in Capek is clearly disclosed as being initiated by a break in the streaming media to initiate the "dead time", *i.e.* time period A, and clearly not "independent of boundaries of the multimedia file." Capek even touts making inserts during a delay period.

1. Capek Touts Making Inserts During Delays In Receiving Files From A Server

Capek repeatedly touts its disclosure as providing inserts during a delay in receiving a file from server 26. A few of the excerpts are as follows:

Capek, col. 6: 66 through col. 7: 16

> The present invention takes advantage of ***retrieval delays in interactive systems*** by providing informative and/or engaging information in a format suitable for the type of interactive system in which the present invention is operating. For instance, a web page may be provided to a user ***waiting for a home page of a particular web site to download*** in the context of the WWW. Likewise, a video/audio clip may be provided to a person ***waiting for the presentation of a selected movie*** in the context of on-demand television. Further, the information provided to the user ***during the delay*** may be customized for the user to increase the users interest and to make the information more engaging.

Capek, col. 10: 29-37:

> Accordingly, the present invention is able to provide an insertion of customized information to a client ***during the retrieval*** of requested program materials ***which, without the present invention, will be perceived as dead time to the client 24***. This is graphically illustrated in FIGS. 4A and 4B which show the timing relationship between a system that does not implement the present invention (FIG. 4A) and a system which does implement the present invention (FIG. 4B).

Capek goes on to explain that providing inserts during the retrieval delay as being "advantageous because it eliminates the frustration and annoyance users often experience when waiting for requested program material to be downloaded in distributed interactive systems." Capek, col. 7: 10-14.

2. Capek Defines An Insert As Provided During Delays

Capek even defines the term "insert or insertion" as used in its disclosure as "information provided to the user during the delays." See, Capek, col. 7: 14-16 ("for purposes of the present disclosure, the information provided to the user during the delays is referred to hereinafter as an insert or insertion"). Clearly, one of skill in the art would understand that Capek discloses to provide inserts to a client during delays in retrieving files from a server. Yet, in spite of numerous statements in Capek, the Examiner interprets Capek to actually disclose to provide inserts independently of boundaries in a multimedia file.

3. The Examiner's Conclusions Are Misplaced

The Examiner attempts to refute the plain statements provided in the Capek reference itself with micro-analyzing various individual sentences in Capek, without apparent regard for their context or intended subject. Particularly, in the Final Office action, the Examiner points to col. 9: 13-16, in the Advisory Action, the Examiner points to col. 5: 14-16, 20-22 and 41-52; col. 7: 49-52; col. 9: 6-24; col. 10: 18-28 and lines 1-67. None of the portions cited by the Examiner remotely suggest to provide an "insert" independent of the boundaries of a streaming media file. Apparently recognizing this, the Examiner strings together selected sentences from disparate parts of the disclosure and juxtaposes them in a manner to attempt to rationalize away from the expressed statements of intent in Capek. See, Advisory Action, pp. 4-5. However, such rationalization, no matter how creative cannot be a substitute for actual disclosure, nor can it refute what is actually disclosed by Capek.

a. The Examiner's Rationalization Is Not Supported By Capek

The Examiner's latest rationalization provided in an Advisory Action is as follows with indicators (denoted by "Points 1-6" and "Conclusion") provided by Applicant in bold for discussion:

> wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file. (Capek, co1.5, lines 20-22, lines 41-52; co1.7, lines 49-52; co1.9, lines 6-24; col. 10, lines 18-28; col.10, lines 1-67). **Point 1** Capek includes a control mechanism that "will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server" (Capek, co1.9, lines 11-13). **Point 2** In other words, Capek's control mechanism will replace the insertion data, which may be "text, graphics, animation, motion video, sound, etc" as well as "the combination of data having different formats into a single insertion for providing a multimedia experience" (Capek, co1.7, lines 49-52), with the requested material once it is available. **Point 3** According to Capek, the control logic's function is to "replaces the insertion with the requested program material after the program is retrieved" (Capek, co1.5, lines 20-22). **Point 4** Also, the "insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client" (Capek, col.10, lines 18-27). **Point 5** In addition, Capek teaches "wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time may alternatively be based upon the amount of time required to retrieve the information from the second computer" (Capek, co1.5, lines 41 -52). **Conclusion** Hence, Capek teaches of inserting the alternate media file into the multimedia stream regardless of the stream since (**Point 6**) the insertion, as "a complete insertion or elements of an insertion that can be used to generate a complete insertion dynamically" (Capek, co1.5, lines 14-1 6) can be done while waiting for the retrieval of requested stream (*i.e.*, ***during a network delay in the middle of transmitting the multimedia perhaps***), before the transmission of the multimedia altogether, etc.

Advisory Action, pp. 4-5.

Regarding Point 1, while the Examiner seems to make much out of the fact that an insert is replaced by a program which was requested and retrieved, one would normally expect that the user may actually want to access to their requested program rather than the insert imposed upon them. In this regard, the insert is still provided to the user in the retrieval delay period and then ended when the retrieval delay period ends, a.k.a. when the requested program is provided. The process of providing the insert is clearly dependent on the boundaries of the retrieved program. Moreover, the control mechanism is utilized by the client, and "is delivered to the client as a part of the insertion" and "can enable the client to interact with and control the insertion," as stated by Capek in the first sentences of the paragraph from which the Examiner takes the quoted passage. The control mechanism is discussed in more detail below. In any event, this cited portion clearly corresponds with the statements in Capek that the insertion is provided during a retrieval delay period.

Regarding Point 2, whether the insertion is "text, graphics, animation … etc." merely pertains to the content of the insertion. The content and format of the insertion is largely irrelevant to the manner of inserting the insertion in a data stream with respect to a multimedia file. In other words, the insertion is still provided in the retrieval delay time, whatever its content or format. See, Capek, col. 7: 47-65.

As to Point 3, the control logic's function is to allow the client to control how to interact with the insertion. The discussion of the control logic is provided in greater detail herein below. Of course, the user would naturally desire to eventually replace the insertion with the program which they requested. Again, the ability for the client to

control its interaction with the insertion still does not depart from providing the insertion in a retrieval delay time as disclosed in Capek.

As to Point 4, the Examiner is partially describing the operation of providing the insertion in the delay period for retrieving a selected program from a server. This passage, when reasonably construed, clearly indicates that the insertion is not provided independent of the boundaries of the requested program, rather only before the requested program is provided. For example, in the same paragraph as the quoted passage, Capek states "the insertion manager 20 may make a determination of whether the delay in retrieving the program material is sufficiently long to justify retrieving an insertion and sending the insertion to the client 24 for presentation." Capek, col. 9: 57-61. Capek contemplates not sending an insertion at all if the delay is insufficient. Capek, col. 9: 61-66. Capek also recognizes that determining whether an upcoming retrieval delay is long enough may require estimation, such as being based on historical knowledge. Capek, col. 9: 66 through col. 10:13. As to the particular citation quoted by the Examiner, Capek proposes to buffer the requested program material to effectively extend the delay period so that the insert may be provided to the client, then the buffered material is provided to the client at an increased transmission rate so that the program material arrives to the client as if it were not buffered. Capek, col. 10: 13-20. Clearly, buffering the requested program material merely extends the delay period in which an insertion may be provided, *i.e.* the insertion is still provided in the delay period, and not independent of the boundaries of the program material. Perhaps most telling, the sentence immediately following the discussion of buffering the program material touts the disclosure of Capek as being "able to provide an insertion … during the retrieval of requested program

materials which, without the present invention, will be perceived as ***dead time*** to the client 24." Capek, col. 10: 29-33.

Point 5 is again referring to the buffering of the requested program material, but the Examiner merely quotes to the Summary Of The Invention section rather than rely on the more detailed description of this operation in the Detailed Description section. Again, buffering the retrieved program material ("the transmission of the retrieved application may … be preceded by waiting a preselected period of time") merely extends the delay period to allow the insertion to be provided. The insertion is still transmitted in the delay period prior to transmitting the requested program, *i.e.* not independent of the boundaries of the requested program.

As to the Examiner's Conclusion, it is completely unsupported and even contradicted by the express statements of Capek and reasonable interpretations of the portions of Capek cited by the Examiner. Moreover, it is not entirely clear if the proceeding points 1-5 on the previous page of discussion were intended to support this conclusion or if Point 6 is intended to support the conclusion itself.

As to Point 6, the Examiner appears to attempt to may hay out of the mere existence of the dynamically created insertion. However, Capek does not disclose to transmit a dynamically created insertions (which is presumably created by the insertion manager) any differently than a completed insertion. See, col. 7: 39-47 ("the insertion data may be elements of an insertion that may be dynamically combined ***to create an insertion that can be sent to the client***"). Certainly, there is nothing in Capek which supports the Examiner's conclusion that a dynamic insertion can be "completed" "during a network delay in the middle of transmitting the multimedia perhaps." Advisory Action,

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pp. 4-5. Indeed, the statement is nothing more than blatant speculation fueled by the imagination of the Examiner, perhaps. Such self created disclosure clearly cannot satisfy a basis for anticipation under 35 U.S.C. § 102. There is simply nothing in Capek which suggests that the "dynamically completed insertion" is provided to the client at any time other than a retrieval delay, and the Examiner cites to nothing to support such allegation.

Clearly, none of the portions cited by the Examiner disclose or suggest to insert an alternative media file in a stream independent of boundaries of a multimedia file, and the Examiner's conclusions are unsupported and contradicted by the disclosure of Capek.

b. The control mechanism does not control when the insertion is inserted into the data stream

The Examiner heavily relies on the "control mechanism" to attempt to meet Applicant's claims. The control mechanism is described in detail in col. 9: 6-24 of Capek, with bold and italics added by Applicant for emphasis:

> The insertions may include a control mechanism ***that is delivered to the client as a part of the insertion***. The control mechanism preferably comprises programming or specifications ***that can enable the client to interact with and control the insertion***. At a minimum, it is expected that the control mechanism will provide for the replacement of the insertion by the requested program material ***once the program material is received from the distributed server***. Other functionality that may be provided by the control mechanism include the dismissal of a particular insertion or the discontinuance of insertions in general. The control mechanism may take any number of forms depending upon the technology supported by the network 28. For instance, in some hypermedia systems the control mechanism may be nothing more than a parameter which requires the client 24 to re-request the requested program material after it has been presented with an insertion. Other hypermedia systems may support actual executable instructions that provide control of the hypermedia system, and more particularly, the insertion.

The Final Office action relies on the statement in Capek that that "other functionality that may be provided by the control mechanism include the dismissal of a particular insertion or the discontinuance of insertions in general" (Capek, col. 9: 13-16). Based on the statement, the Examiner concluded that "it is clear that Capek anticipates of a situation where the insertion manager interrupts or ceases the insertion in order to deliver the requested material to the user." Final Office action, pg. 10.

However, the paragraph found in col. 9: 6-24 merely discusses a "control mechanism that is delivered to the client as a part of the insertion." Capek, col. 9, 6-7. Clearly, as the control mechanism is delivered with the insertion, it does not control when the insertion is inserted into the data stream, *i.e.* when it is delivered to the client. Rather, as clearly described in Capek, the control mechanism is used by the client to "enable ***the client*** to interact with and control the insertion." Capek, col. 9: 7-10. The insertion must clearly already have been received by the client (a.k.a. a personal computer 14) to be controlled by the client, *i.e.* the client's control of the insertion held by the client has no affect on the structure or contents of a data stream provided to the client. Moreover, if the insertion were interrupted when a requested program is received by the client, as concluded by the Examiner, such would clearly indicate that the insertion is <u>not</u> provided independent of the boundaries of a multimedia file.

Again, Capek defines an "insertion" as something which is provided during a delay in retrieving requested data from a server. Capek even provides an example of providing the client with an audio insertion while waiting to retrieve a web page and allowing the client to listen to the audio insertion after the web page is received and being viewed by the client. Capek, col. 7: 58-65 ("the audio message may continue to play to

its end without premature termination even though the web page may have been retrieved and is being presented simultaneously to the user"). Clearly, the "control mechanism" merely provides ***the client*** the ability to control its own interaction with the insertion (*e.g.* viewing or listening), it does not control when or in what manner the insertion is provided in the data stream provided to the client. Clearly, the Examiner's reliance on the "control mechanism" is misplaced.

As Capek does not disclose or suggest each and every element of amended claims 1 and 21 Capek does not anticipate amended claims 1 and 21. Likewise, as claims 3-20 and 22-30 depend on amended claims 1 and 21 respectively, and contain all of the limitations thereof, Capek also does not anticipate claims 3-20 and 22-30. Accordingly, Applicant respectfully request the rejections of claim 1 and 3-30 to be reversed.

B. Capek Does Not Disclose A Control Signal As Recited In Claim 2

Claims 1-30 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Capek et al. (U.S. Pat. 6,094,677).

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1380 (Fed. Cir. June 2006) ("a claim is anticipated under 35 U.S.C. § 102 'if each and every limitation is found either expressly or inherently in a single prior art reference'" citing, *Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc.*, 246 F.3d 1368, 1374 (Fed. Cir. 2001). See also, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986); *Connell v. Sears, Roebuck & Co.*, 220 USPQ 193, 198 (Fed. Cir. 1983).

Capek does not disclose an arrangement for inserting an alternative media file into a streaming multimedia file which includes a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file, wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit, as recited by claim 2. More particularly, Capek does not disclose at least the limitations recited in the clause "wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit," as recited by claim 2

As discussed above, Capek discloses to use an insertion manager 20 to provide an insert from an insertion repository 22 to a client 24 device during a delay of receiving requested data from a server 26. See. Capek, Title, Abs., Figs. 1, and 4A and 4B. The Examiner repeats the tactic of stringing together text segments from disparate parts of the disclosure of Capek in an attempt to rationalize an imaginary existence of Applicant's control signal in Capek. In summary of the Examiner's comments, the Examiner

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interprets Capek's disclosed "control mechanism" to satisfy Applicant's claimed "control signal." See, Advisory Action, pp. 8-10 ("Capek includes a control mechanism that 'will provide for replacement of the insertion …"). However, other than containing the word "control" Capek's "control mechanism" has nothing in common with Applicant's claimed control signal.

As discussed above, Capek's "control mechanism" is provided to the client within an insert, and is to be used by the client to control their interaction with the insert. See, Capek, col. 9: 6-24 ("The insertions may include a control mechanism ***that is delivered to the client as a part of the insertion***. The control mechanism preferably comprises programming or specifications ***that can enable the client to interact with and control the insertion***."). There is no suggestion in Capek of using a control signal that "indicates that a complete alternative file is stored and is ready for transmission" as recited by claim 2.

As to the specifics of the Examiner's arguments presented in the Advisory Action, there is no suggestion in Capek that the "control mechanism" control the content of the insert, as the Examiner now seems to suggest ("In other words, Capek's control mechanism will replace the insertion data, which may be text, graphic, animation … (Capek col. 7: 49-52)"). Advisory Action, pg. 9. There is also no suggestion in Capek that the "control mechanism" controls the timing in which an insert is made in a data stream, as the Examiner now seems to suggest by his juxtaposition of selected sentences discussing the control mechanism from the Summary of The Invention (col. 5: 20-22) with the portion of the Detailed Description discussing the timing of the inserts (col. 10: 18-27). See, Advisory Action, pp. 9-10 ("According to Capek, the control logic's function is to 'replace the insertion … (Capek, col. 5: 20-22). Also, the "insertion

manager may then make a determination of how long to provide the insertion … (Capek, col. 10: 18-27)"). The approximately column and one half discussion of the timing of placing the insert in the data stream Capek (Capek, col. 9: 54 through col. 10: 67) does not mention the term "control mechanism" at all. In short, the Examiner's argument is nothing more than a tactic of juxtapositioning selected sentences to create an appearance of disclosure by Capek. It is tactics like these that give rise to the simple maxim of the legal requirements of anticipation – either the reference discloses all of the claimed features or not, an argument, no matter how eloquent, creative or exhaustive is not a substitute for disclosure. See, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1380 (Fed. Cir. June 2006) "anticipation is a question of fact." citing *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1220 (Fed. Cir. 2003).

As Capek does not disclose each and every limitation of claim 2, Applicant respectfully request the rejection of claim 2 to be reversed.

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VIII. Conclusion

Having fully responded to the Office action, the application is believed to be in condition for allowance. Should any issues arise that prevent early allowance of the above application, the examiner is invited contact the undersigned to resolve such issues.

To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Respectfully submitted,

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Appendix

1. *(currently amended)* An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and

a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file in the stream,

wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.

2. *(currently amended)* An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

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a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and

a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file,

wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit.

3. *(original)* The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that an alternative file is available to be streamed to said first cache from an external server and is ready to begin transmission to the predetermined at least one end-user.

4. *(original)* The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.

5. *(original)* The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the cached alternative file stored in said first cache in response to a signal from the control unit that an alternative file is ready to transmit.

6. *(previously presented)* The arrangement as defined in claim 1 wherein the control signal input to said control unit indicates that the alternative media file transfer to the predetermined at least one end-user is completed, the control unit thereafter supplying a switching output signal to said switching mechanism requesting said switching mechanism to supply as the output the cached streaming multimedia file from the second cache.

7. *(original)* The arrangement as defined in claim 1 wherein the arrangement further comprises a billing system coupled to the control unit for receiving information from said control unit regarding the identity of each alternative media file transmitted, the identity of the at least one end-user, and related statistics regarding the transmission of various alternative media files to a plurality of different end-users.

8. *(previously presented)* The arrangement as defined in claim 7 wherein the related statistics include the number of times each alternative media file was requested during a predetermined period of time.

9. *(previously presented)* The arrangement as defined in claim 7 wherein the related statistics includes the time of day and date that each alternative media file was requested.

10. *(original)* The arrangement as defined in claim 1 wherein the alternative file is defined as an advertisement file.

11. *(original)* The arrangement as defined in claim 1 wherein the alternative file is defined as an emergency information file.

12. *(original)* The arrangement as defined in claim 1 wherein the arrangement is disposed at a local point of presence in a communication network.

13. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed at a headend location in an HFC communication network.

14. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a wide area data network and a local distribution network.

15. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and a DSL communication network.

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16. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and wireless communication network.

17. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed in a communications device at an end-user location.

18. *(original)* The arrangement as defined in claim 17 wherein the communications device comprises a set-top box.

19. *(original)* The arrangement as defined in claim 17 wherein the communications device comprises a residential gateway device.

20. *(original)* The arrangement as defined in claim 1 wherein the arrangement further comprises a rule server for retrieving information related to the predetermined at least one end-user and selecting the alternative media file based on said retrieved information and the specific content of the streaming multimedia file.

21. *(currently amended)* A method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user, the method comprising the steps of:

a) storing a selected alternative multimedia file in a first cache at a local point of presence;

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b) establishing a communication link between said streaming multimedia file and said predetermined end-user;

c) transmitting said streaming media file to said end-user;

d) switching transmission from said streaming multimedia file to said alternative media file stored in said first cache;

e) storing in a second cache said streaming multimedia file received during the transmission of said alternative media file; and

f) upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file,

wherein the alternative media file is inserted in the streaming multimedia independent of boundaries of the multimedia file.

22. *(original)* The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) receiving a request from a predetermined end-user for a streaming multimedia file;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

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23. *(original)* The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) detecting the start of a streaming multimedia flow;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

24. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.

25. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the beginning of said multimedia file.

26. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the end of said multimedia file.

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27. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at any location during transmission of said multimedia file.

28. *(original)* The method as defined in claim 21 wherein in performing step d), providing transition segments between the streaming multimedia file and the alternative file.

29. *(original)* The method as defined in claim 28 wherein the transition segments provide "fade in" and "fade out" between said files.

30. *(previously presented)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file based on a timing signal embedded in said streaming multimedia file.

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GOOGLE LLC / Page 80 of 321

Electronic Patent Application Fee Transmittal

Application Number:	09734220
Filing Date:	11-Dec-2000
Title of Invention:	Seamless arbitrary data insertion for streaming media
First Named Inventor:	Marc W. Kauffman
Filer:	Larry Tim Cullen
Attorney Docket Number:	D02487

Filed as Large Entity

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Filing a brief in support of an appeal	1402	1	500	500
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**500**

Electronic Acknowledgement Receipt

EFS ID:	1161281
Application Number:	09734220
Confirmation Number:	5436
Title of Invention:	Seamless arbitrary data insertion for streaming media
First Named Inventor:	Marc W. Kauffman
Customer Number:	43471
Filer:	Larry Tim Cullen
Filer Authorized By:	
Attorney Docket Number:	D02487
Receipt Date:	18-AUG-2006
Filing Date:	11-DEC-2000
Time Stamp:	14:19:11
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	$500
RAM confirmation Number	1039
Deposit Account	502117
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
1	Appeal Brief Filed	Appeal_Brief.pdf	209203	no	29
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	8132	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	217335		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

43471 7590 07/19/2006

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

EXAMINER	
DUONG, THOMAS	
ART UNIT	**PAPER NUMBER**
2145	

DATE MAILED: 07/19/2006

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

PTO-90C (Rev. 10/03)

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	09/734,220	KAUFFMAN ET AL.	
	Jason D. Cardone	Art Unit 2145	
Document Code - AP.PRE.DEC			

Notice of Panel Decision from Pre-Appeal Brief Review

This is in response to the Pre-Appeal Brief Request for Review filed 5/22/06.

1. ☐ **Improper Request** – The Request is improper and a conference will not be held for the following reason(s):

☐ The Notice of Appeal has not been filed concurrent with the Pre-Appeal Brief Request.
☐ The request does not include reasons why a review is appropriate.
☐ A proposed amendment is included with the Pre-Appeal Brief request.
☐ Other: .

The time period for filing a response continues to run from the receipt date of the Notice of Appeal or from the mail date of the last Office communication, if no Notice of Appeal has been received.

2. ☒ **Proceed to Board of Patent Appeals and Interferences** – A Pre-Appeal Brief conference has been held. The application remains under appeal because there is at least one actual issue for appeal. Applicant is required to submit an appeal brief in accordance with 37 CFR 41.37. The time period for filing an appeal brief will be reset to be one month from mailing this decision, or the balance of the two-month time period running from the receipt of the notice of appeal, whichever is greater. Further, the time period for filing of the appeal brief is extendible under 37 CFR 1.136 based upon the mail date of this decision or the receipt date of the notice of appeal, as applicable.

☒ The panel has determined the status of the claim(s) is as follows:
Claim(s) allowed: *None*.
Claim(s) objected to: *None*.
Claim(s) rejected: *1-30*.
Claim(s) withdrawn from consideration: *None*.

3. ☐ **Allowable application** – A conference has been held. The rejection is withdrawn and a Notice of Allowance will be mailed. Prosecution on the merits remains closed. No further action is required by applicant at this time.

4. ☐ **Reopen Prosecution** – A conference has been held. The rejection is withdrawn and a new Office action will be mailed. No further action is required by applicant at this time.

All participants:

(1) *Jason D. Cardone*. (3) *Joseph Dixon*.

(2) *Thomas Duong*. (4)_____.

JASON CARDONE
SUPERVISORY PATENT EXAMINER

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MOTOROLA

FAX TRANSMITTAL SHEET

Motorola, Inc.
Intellectual Property Section
Law Department
101 Tournament Drive
Horsham, PA 19044

Telephone: 215-323-1797
Facsimile: 215-323-1300

7 Number of Pages (including this page)

Date: May 22, 2006

To: Examiner: Thomas Duong
Art Unit: 2145

Location: United States Patent and Trademark Office

Fax No.: 571-273-8300

From: Attorney: Lawrence T. Cullen Reg. No. 44,489

Subject: Serial No. 09/734,220 Filed: 12/11/2000 Docket No. D2487

NOTICE: This facsimile transmission may contain information that is confidential, privileged, or exempt from disclosure under applicable law. It is intended only for the person to whom it is addressed. Unauthorized use, disclosure, copying or distribution may expose you to legal liability. If you have received this transmission in error, please immediately notify us by telephone (collect) to arrange for return of the documents received and any copies made. Thank you.

MESSAGE:

Enclosed herewith, please find Pre-Appeal Brief in reponse to the final office action mailed on February 23, 2006, Notice of Appeal, with fees due, for filing in the above-identified application.

PLEASE GIVE THESE PAPERS TO:

EXAMINER:	**Thomas Duong**
GROUP ART UNIT:	2145
ATTORNEY DOCKET NO.:	D2487

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MAY 22 2006

Atty. Doc. No.: D2487

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Inventor: Marc W. Kauffman	Confirmation No.: 5436
U.S. Serial No.: 09/734,220	Customer No.: 000043471
Filed: December 11, 2000	Art Unit: 2145
	Examiner: Thomas Duong

Title: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

PRE-APPEAL BRIEF
REQUEST FOR REVIEW

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

Please enter these arguments in response to the Final Office Action mailed on February 23, 2006 and conduct a pre-appeal brief conference.

CERTIFICATE OF FACSIMILE
I hereby certify that this correspondence is being filed by facsimile to Assistant Commissioner for Patents at 571 273-8300
on 5/22/06 by _____
Lawrence T. Cullen

PAGE 3/7 * RCVD AT 5/22/2006 3:17:32 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/11 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):02-00

Atty. Doc. No.: D2487

REMARKS

I. Introduction

Claims 1-30 are pending in the above application.

Claims 1-30 stand rejected under 35 U.S.C. § 102.

Claims 1, 2 and 21 are independent claims.

II. Rejections Under Prior Art

Claims 1-30 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Capek et al. (U.S. Pat. 6,094,677).

A. Capek Does Not Disclose All Of The Claimed Limitations

As explained in Applicant's prior responses filed on July 5, 2005, November 18, 2005, and April 24, 2006, Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file, as substantially recited by amended claims 1 and 21.

Capek discloses a technique of providing mainly computer program products during retrieval delays in an interactive system. Capek, abs.; col. 6: 66 through col. 7: 16 ("The present invention takes advantage of retrieval delays in interactive systems ... For purposes of the present disclosure, the information provided to the user during the delays is referred to hereinafter as an insert or insertion"). Capek relies on an insertion manager 20 to receive a program request from a client, pass the request to a server containing insertions, and pass programs received from the server to the client. Capek, Fig. 2; col. 7: 47. If the time to retrieve the program from the server is excessive, the insertion manager

PAGE 4/7 * RCVD AT 5/22/2006 3:17:32 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/11 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):02-00

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retrieves an insertion from an insertion repository 22 during the delay. Capek, Fig. 2 and Fig. 3, steps 30, 32, 34 and 36.

More particularly, Capek discloses to determine if an insert should be provided based on the sufficiency of the delay period, which may be determined by the actual delay seen or an expected delay based on historical information. Col. 10: 52-68; and col. 11: 61 – col. 12: 24. Capek clearly explains this process, with reference to Figs. 4A (the prior art to Capek) and 4B (the implementation of Capek) as follows:

> Accordingly, the present invention is able to provide an insertion of customized information to a client ***during the retrieval*** of requested program materials which, without the present invention, will be perceived as dead time to the client 24. This is graphically illustrated in FIGS. 4A and 4B which show the timing relationship between a system that does not implement the present invention (FIG. 4A) and a system which does implement the present invention (FIG. 4B). Referring to FIG. 4A which does not implement the present invention, **a client initiates a request at time A** which is passed through the insertion mechanism at time B to the server 26 within the network 28 at time C. After a time delay, the server 26 begins to transmit the requested program material to the client 24 at time D. The beginning of the program material that was sent at time D ultimately arrives at the client 24 at time F. The server 26 continues to transmit the program material through time G and the requesting client continues to receive the program material until time I. As evident from FIG. 4A, the client experiences a delay from time A through at least time F, and possibly through time I. During the interval from time F to time I, the user may be presented with results depending upon the specific technology and specific content for that particular instance.
>
> With the present invention, as illustrated in FIG. 4B, the insertion manager at time B **not only passes the request on to the server 26** but begins the process of the present invention which may include making certain determinations as to whether or not the delay may be sufficient to provide an insertion. This may include the initiation of a timer at time B to determine if insertion manager 20 receives a response from the server 26 within a predefined period of time. If the insertion manager 20 does not receive a response by time W, then the insertion manager 20 may respond by sending an insertion to the client 24 which may take from time W to time Y. The insertion is received at the client 24 from time X to time Z. Therefore, the client is presented with the insertion from at least time Z through time F, and perhaps from time X through time I, again depending upon the specific content and technology.

PAGE 5/7 * RCVD AT 5/22/2006 3:17:32 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/11 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):02-00

Capek is clearly focused on delays in retrieving data from the server to the client. Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.

B. The Examiner's Arguments Are Misplaced

In the Advisory Action, the Examiner alleges that Capek does disclose to insert an alternative media file in a stream independent of the boundaries of the multimedia file. Advisory Action, pg. 4-5. The Examiner points to four locations in Capek and attempts to establish the fact with an argument spanning an entire page and a half. The Examiner's reliance on each of the citations is misplaced. First the Examiner points to a "control mechanism" that "will provide for the replacement of the insertion by the requested program material once the program material is received from the distributed [sic] server", citing col. 9: 11-13. The fact that the insertion is replaced by the program the client originally requested from the server when it is received makes it clear that the boundaries of the program clearly are considered for the insertion of Capek. Also, contrary to the suggestions in the Advisory action, the discussion in the paragraphs spanning column 9 to column 10 of Capek, is clearly relying on a delay period in the data stream. The time periods discussed in Capek are related to retrieving an advertisement insertion from the server or the "second computer" to the client within the delay period. Col. 9: 54 through col. 10: 28 ("the determination of whether or not the delay will be sufficiently long may be based upon a variety of factors ...").

PAGE 6/7 * RCVD AT 5/22/2006 3:17:32 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/11 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):02-00

Furthermore, the Capek also does not disclose using a control signal output from the cache which indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit, as recited by claim 2, amended to be in independent form.

Accordingly, as Capek does not disclose or suggest each and every element of the pending claims and hence does not anticipate the pending claims.

III. Conclusion

Accordingly, Applicant respectfully requests withdrawal of the rejections and allowance of the above application. To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Date: 5/22/06

Respectfully submitted,

By: _____

Lawrence T. Cullen
Reg. No.: 44,489

Motorola Connected Home Solutions
101 Tournament Drive
Horsham, PA 19044
(215) 323-1797

PAGE 7/7 * RCVD AT 5/22/2006 3:17:32 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/11 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):02-00 P.07

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MAY 22 2006

NOTICE OF APPEAL FROM THE EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES	Docket Number D2487

I hereby certify that this correspondence is being sent via facsimile on May 22, 2006	In re Application of Marc W. Kauffman
Signature	Application Number 09/734,220
Typed or printed name Carol J. Smith	Filed 12/11/2000
	For Seamless Arbitrary Data Insertion for Streaming Media
	Art Group 2145
	Examiner Thomas Duong

Applicant hereby appeals to the Board of Patent Appeals and Interferences from the last decision of the examiner.

The fee for this Notice of Appeal is (37 CFR 1.17(b)) $ 500.00

- ☐ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is: $ _____
- ☐ A check in the amount of the fee is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director has already been authorized to charge fees in this application to a Deposit Account. I have enclosed a duplicate copy of this sheet.
- ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account Number **502117**. I have enclosed a duplicate copy of this sheet.
- ☐ A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is enclosed.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit care information and authorization on PTO-2038.

05/23/2006 STEUMEL1 00000038 502117 09734220
01 FC:1401 500.00 DA

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96)
- ☒ attorney or agent of record. Registration number 44,489
- ☐ Attorney or agent acting under 37 CFR 1.34(a). Registration number if acting under 37 CFR 1.34(a). _____

Signature

Lawrence T. Cullen
Typed or printed name

215-323-1797
Telephone number

5/22/06
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.91. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Office, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

43471 7590 05/12/2006

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

EXAMINER	
DUONG, THOMAS	

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 05/12/2006

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

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 09/734,220	**Applicant(s)** KAUFFMAN ET AL.	
	Examiner Thomas Duong	**Art Unit** 2145	

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

THE REPLY FILED 24 April 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: *None*.
   Claim(s) objected to: *None*.
   Claim(s) rejected: *1-30*.
   Claim(s) withdrawn from consideration: *None*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: Please see attachment sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

JASON CARDONE
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

Response to Argument

1. The Applicants' arguments and amendments filed on April 24, 2006 have been fully considered, but they are not persuasive.

2. With regard to *claims 1 and 21*, the Applicants point out that,

   - *Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file, as substantially recited by amended claims 1 and 21.*

   However, the Examiner finds that the Applicants' arguments are not persuasive because Capek discloses:

   - *a first cache (insertion repository 22) for storing a received alternative media file;* (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2)

     Capek discloses, *"in accordance with another aspect of the present invention, the insertion may include control logic that imparts control over the insertion to the user. This may include providing control logic that replaces the insertion with the requested program material after the program material is retrieved. Alternatively, the control logic may provide the insertion for a predetermined period of time. In this case, the period of time that that insertion is presented may de dependent upon how much time it takes to retrieve the requested program material. The*

insertion may include data of a variety of formats, such as audio data, graphical images, video images, text, or any combination thereof" (Capek, col.5, lines 17-28). Hence, Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.

- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2)

  Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client.

- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2)

  Capek teaches of an insertion manager that inserts data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client.

- *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file in the stream* (Capek, col.5, lines 20-22; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27).

- *wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.* (Capek, col.5, lines 20-22, lines 41-52; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28; col.10, lines 1-67)

Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (Capek, col.7, lines 49-52), with the requested material once it is

available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27). In addition, Capek teaches *"wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time may alternatively be based upon the amount of time required to retrieve the information from the second computer"* (Capek, col.5, lines 41-52). Hence, Capek teaches of inserting the alternate media file into the multimedia stream regardless of the stream since the insertion, as *"a complete insertion or elements of an insertion that can be used to generate a complete insertion dynamically"* (Capek, col.5, lines 14-16) can be done while waiting for the retrieval of requested stream (i.e., during a network delay in the middle of transmitting the multimedia perhaps), before the transmission of the multimedia altogether, etc.

3. With regard to *claim 22*, the Applicants point out that,

- *Furthermore, the final Office action has not addressed the fact that Capek also does not disclose using a control signal output from the cache which indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit, as recited by claim 2, amended to be in independent form.*

However, the Examiner finds that the Applicants' arguments are not persuasive because Capek discloses:

- *a first cache (insertion repository 22) for storing a received alternative media file;* (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2)

  Capek discloses, *"in accordance with another aspect of the present invention, the insertion may include control logic that imparts control over the insertion to the user. This may include providing control logic that replaces the insertion with the requested program material after the program material is retrieved. Alternatively, the control logic may provide the insertion for a predetermined period of time. In this case, the period of time that that insertion is presented may de dependent upon how much time it takes to retrieve the requested program material. The insertion may include data of a variety of formats, such as audio data, graphical images, video images, text, or any combination thereof"* (Capek, col.5, lines 17-28). Hence, Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.
- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2)

Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client.

- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2)

  Capek teaches of an insertion manager that inserts data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client.

- *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file,* (Capek, col.5, lines 20-22, lines 41-52; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28; col.10, lines 1-67)

  Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia*

experience" (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27). In addition, Capek teaches *"wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time may alternatively be based upon the amount of time required to retrieve the information from the second computer"* (Capek, col.5, lines 41-52). Hence, Capek teaches of inserting the alternate media file into the multimedia stream regardless of the stream since the insertion, as *"a complete insertion or elements of an insertion that can be used to generate a complete insertion dynamically"* (Capek, col.5, lines 14-16) can be done while waiting for the retrieval of requested stream (i.e. during a network delay in the middle of transmitting the multimedia perhaps), before the transmission of the multimedia altogether, etc.

- *wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at*

least one end-user, or will be ready in time to transmit. (Capek, col.5, lines 20-22, lines 41-52; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28; col.10, lines 1-67)

Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27). In addition, Capek teaches *"wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time may alternatively be based upon the amount of time required to retrieve the*

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Attorney Docket No.: D2487

APR 2 4 2006

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Inventor: Marc W. Kauffman	)	Confirmation No.: 5436
	)	
	)	Customer No.: 000043471
U.S. Serial No.: 09/734,220	)	
	)	Art Unit: 2145
Filed: December 11, 2000	)	
	)	Examiner: Thomas Duong
	)	

Title: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

RESPONSE

Please enter AF amendment

5/8/06

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

In response to the final Office action mailed on February 23, 2006, having a three month shortened statutory period of response set to expire on May 23, 2006, please reconsider the above application as follows:

CERTIFICATE OF FACSIMILE
I hereby certify that this correspondence is being filed by facsimile to Assistant Commissioner for Patents at 571 273-8300 on 4/24/06 by
Lawrence T. Cullen

RECEIVED
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APR 2 4 2006

FACSIMILE COVER

To: Thomas Duong; A. U. 2145

From: Larry Cullen

U.S. Serial No.: 09/734,220

Phone: 215-323-1797

Facsimile No.: 571 273-8300

Date: April 24, 2006

Pages (including cover): 7

CERTIFICATE OF FACSIMILE

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on 4/24/06 by

Lawrence T. Cullen

Attorney Docket No.: D2487

APR 2 4 2006

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Inventor: Marc W. Kauffman	Confirmation No.: 5436
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I hereby certify that this correspondence is being filed by facsimile to Assistant Commissioner for Patents at 571 273-8300
on 4/24/06 by _____
Lawrence T. Cullen

REMARKS

I. Introduction

Claims 1-30 are pending in the above application.

Claims 1-30 stand rejected under 35 U.S.C. § 102.

Claims 1, 2 and 21 are independent claims.

II. Rejections Under Prior Art

Claims 1-30 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Capek et al. (U.S. Pat. 6,094,677).

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, Akzo N.V. v. U.S. Int'l Trade Commission, 808 F.2d 1471 (Fed. Cir. 1986); Connell v. Sears, Roebuck & Co., 220 USPQ 193, 198 (Fed. Cir. 1983).

As explained in Applicant's prior responses filed on July 5, 2005 and November 18, 2005, both of which are herein incorporated, Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file, as substantially recited by amended claims 1 and 21. Capek discloses to provide an insert during a delay of receiving requested data. Abs.; Figs. 4A and 4B. Capek discloses to maintain an insertion repository 22 which provides inserts to insertion manager 20, at which point insertions are made in a delay period. Fig. 2. Capek discloses to determine if an insert should be provided based on the sufficiency of the delay period, which may

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be determined by the actual delay seen or an expected delay based on historical information. Col. 10: 52-68; and col. 11: 61 – col. 12: 24. Once the data is retrieved it is provided after the insert, i.e. when the insert is selectively provided with the data, the insert is provided at the beginning of the data – during the delay in retrieving the data. Figs. 3-7; col. 10: 29-51; col. 12: 47-55. Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.

While Applicant respectfully appreciates the discussion of Capek in the Office action, Applicant respectfully disagrees with the conclusions reached in the Office action. Particularly, the Office action responds to Applicant's explanation as follows:

> Capek anticipates that "other functionality that may be provided by the control mechanism include the dismissal of a particular insertion or the discontinuance of insertions in general" (Capek, col. 9, lines 13-16). Hence, it is clear that Capek anticipates of a situation where the insertion manager interrupts or ceases the insertion in order to deliver the requested material to the user. In addition, according to Capek, "as evident from FIG. 4a, the client experiences a delay from time A through at least time F, and possibly through time I. During the interval from time F to time I, the user may be presented with results depending upon the specific technology and specific content for the particular instance" (Capek, col. 10, lines 47-51). Capek also states that "the client is presented with the insertion from at least time Z through time F, and perhaps from time X through time I, again depending upon the specific content and technology" (Capek, col. 10, lines 64-67). Hence, Capek anticipates that, during periods of delay in transferring the requested material to the user, the insertion manager may make determinations to deliver inserts of alternative data to the user.

Final Office action, pg. 10-11. However, Capek is concerned with reducing delays between the client and a server containing the content of an ad, i.e. delays in retrieving the ad from the server. See, Figs. 4A and 4B; col. 7: 16-25. The insertion manager does

PAGE 4/7 * RCVD AT 4/24/2006 4:44:03 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/3 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):02-08

not insert the ad, as the final Office action appears to imply, the advertisement is inserted by the client apparently using undisclosed techniques. The insertion manager merely communicates between the client and the server, which typically stores the desired advertisement to be inserted. See, citations above. Capek clearly explains that the procedure in Fig. 4A is prior art to Capek, and Fig. 4B, in which the insertion manager provides an advertisement from its repository to the client when a certain delay has passed is the contribution to the art of Capek. See, Figs. 2, 4A and 4B; col. 10: 29-68 ("referring to FIG. 4A which does not implement the present invention" .... With the present invention, as illustrated in FIG. 4B"). In both Fig. 4A and 4B, the process is initiated by a request from the client, at time A, which also initiates the "dead time" time periods in the media, *i.e.* a break in the media. See, Figs. 4A and 4B. The time period for providing the advertisement to the client in Capek is clearly disclosed as being initiated by a break in the streaming media to initiate the "dead time", *i.e.* time period A, and clearly not "independent of boundaries of the multimedia file." In short, none of the cited portions of Capek remotely disclose or suggest the timing of an insert of an alternative media file independent to the boundaries of a multimedia file stream, as required by the above claims.

Accordingly, as explained in Applicant's previous response, Capek simply does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file. To the extent that the Examiner disagrees with Applicant's explanation, the Examiner is respectfully requested to explain the basis for any such disagreement.

PAGE 5/7 * RCVD AT 4/24/2006 4:44:03 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/3 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):02-08

Accordingly, as Capek does not disclose or suggest each and every element of amended claims 1 and 21 and hence does not anticipate amended claims 1 and 21. Likewise, as claims 3-20 and 22-30 depend on amended claims 1 and 21 respectively, and contain all of the limitations thereof, Capek also does not anticipate claims 3-20 and 22-30.

Furthermore, the final Office action has not addressed the fact that Capek also does not disclose using a control signal output from the cache which indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit, as recited by claim 2, amended to be in independent form. While the Office action cites to col. 7, lines 17-25 of Capek, Capek does not disclose the above features. Capek merely discloses to maintain an insertion repository 22 which contains all of the possible insertions from which a particular assertion is selected. Col. 7: 17-47. A repository 22 is not a cache memory, and there is no indication in Capek whether or not a particular insertion stored in the repository is ready for transmission. Capek clearly does not disclose or suggest to provide a control signal indicating that a complete alternative file is stored and is ready for transmission, or will be ready in time to transmit, as recited by claim 2. To the extent that the Examiner disagrees with Applicant, the Examiner is respectfully requested to explain the basis for such disagreement.

Finally, the final Office action asserts "the Applicants still failed to clearly disclose the novelty of the invention and identify the specific limitation, which would define patentable distinction over prior art." The Examiner is respectfully reminded that the burden of establishing a *prima facie* case lays with the Examiner, and that a prima

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facie case of anticipation can only be established by demonstrating that each and every element of the claims, as arranged in the claims, is disclosed in a single reference. As explained above, the Capek reference does not disclose each and every limitation of the claims and does not anticipate the claims.

III. Conclusion

Having fully responded to the Office action, the application is believed to be in condition for allowance. Should any issues arise that prevent early allowance of the above application, the examiner is invited contact the undersigned to resolve such issues.

To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Date: 4/24/06

Respectfully submitted,

By: _____

Lawrence T. Cullen
Reg. No.: 44,489

Motorola Connected Home Solutions
101 Tournament Drive
Horsham, PA 19044
(215) 323-1797

PAGE 7/7 * RCVD AT 4/24/2006 4:44:03 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/3 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):02-08 TAL P.07

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

43471 7590 02/23/2006

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

EXAMINER	
DUONG, THOMAS	
ART UNIT	**PAPER NUMBER**
2145	

DATE MAILED: 02/23/2006

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

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	09/734,220	KAUFFMAN ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2145	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance 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.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the applicants Amendment filed on November 18, 2005. *Claims 1-30* are presented for further consideration and examination.

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 1-30* are rejected under 35 U.S.C. 102(e) as being anticipated by Capek et al. (US006094677A).

4. With regard to *claims 1 and 21*, Capek discloses,

- *a first cache (insertion repository 22) for storing a received alternative media file;*

  (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2)

  Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.

- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2)

  Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client.

- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2)

  Capek teaches of an insertion manager that inserts data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client.

- *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file in the stream* (Capek, col.5, lines 20-22; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

  Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia*

experience" (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27).

- *wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.* (Capek, col.5, lines 20-22, lines 41-52; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28; col.10, lines 1-67)

  Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had*

been downloaded directly to the client" (Capek, col.10, lines 18-27). In addition, Capek teaches *"wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time may alternatively be based upon the amount of time required to retrieve the information from the second computer"* (Capek, col.5, lines 41-52). Hence, Capek teaches of inserting the alternate media file into the multimedia stream regardless of the stream since the insertion, as *"a complete insertion or elements of an insertion that can be used to generate a complete insertion dynamically"* (Capek, col.5, lines 14-16) can be done while waiting for the retrieval of requested stream (i.e. during a network delay in the middle of transmitting the multimedia perhaps), before the transmission of the multimedia altogether, etc.

5. With regard to *claim 2*, Capek discloses,

- *a first cache (insertion repository 22) for storing a received alternative media file;* (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2)
  Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.
- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2)

Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client.

- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2)

  Capek teaches of an insertion manager that inserts data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client.

- *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file,* (Capek, col.5, lines 20-22, lines 41-52; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28; col.10, lines 1-67)

  Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia*

experience" (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27). In addition, Capek teaches *"wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time may alternatively be based upon the amount of time required to retrieve the information from the second computer"* (Capek, col.5, lines 41-52). Hence, Capek teaches of inserting the alternate media file into the multimedia stream regardless of the stream since the insertion, as *"a complete insertion or elements of an insertion that can be used to generate a complete insertion dynamically"* (Capek, col.5, lines 14-16) can be done while waiting for the retrieval of requested stream (i.e. during a network delay in the middle of transmitting the multimedia perhaps), before the transmission of the multimedia altogether, etc.

- *wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at*

least one end-user, or will be ready in time to transmit. (Capek, col.7, lines 17-25, lines 39-47)

Capek teaches of complete insertions of data to be delivered to the requested client.

6. With regard to *claims 3 and 22-23*, Capek discloses,

- *wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user. or will be ready in time to transmit.* (Capek, col.7, lines 17-25, lines 39-47)

  Capek teaches of complete insertions of data to be delivered to the requested client.

7. With regard to *claims 4-9*, Capek discloses,

- *wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.* (Capek, col.9, lines 6-24)

  Capek teaches of a control mechanism that interacts with and control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client.

8. With regard to *claims 10-11*, Capek discloses,

- *wherein the alternative file is defined as an advertisement file.* (Capek, col.7, lines 17-25, lines 39-47; col.7, line 66 – col.8, line 10; col.8, lines 11-14)

Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.

9. With regard to *claims 12-20*, Capek discloses,

- *wherein the arrangement is disposed at a local point of presence in a communication network.* (Capek, col.7, lines 26-37)

10. With regard to *claims 24-30*, Capek discloses,

- *wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.* (Capek, col.9, lines 6-24)

  Capek teaches of a control mechanism that interacts with and control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client.

Response to Arguments

11. Applicant's arguments with respect to *claims 1-30* have been considered but they are not persuasive.

12. With regard to *claims 1, 2, and 21*, the Applicants point out that:

- *As explained in Applicant's prior response filed on July 5, 2005, Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism,*

wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file, as substantially recited by Amended claims 1 and 21. Capek discloses to provide an insert during a delay of receiving requested data. Abs.; Figs. 4A and 4B. Capek discloses to maintain an insertion repository 22 which provides inserts to insertion manager 20, at which point insertions are made in a delay period. Fig. 2. Capek discloses to determine if an insert should be provided based on the sufficiency of the delay period, which may be determined by the actual delay seen or an expected delay based on historical information. Col. 10: 52-68; and col. 11: 61 - col. 12: 24. Once the data is retrieved it is provided after the insert, i.e. when the insert is selectively provided with the data, the insert is provided at the beginning of the data - during the delay in retrieving the data. Figs. 3-7; col. 10: 29-5 1; col. 12: 47-55. Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.

However, the Examiner finds that the Applicants' arguments are not persuasive because Capek anticipates that *"other functionality that may be provided by the control mechanism include the dismissal of a particular insertion or the discontinuance of insertions in general"* (Capek, col.9, lines 13-16). Hence, it is clear that Capek anticipates of a situation where the insertion manager interrupts or ceases the insertion in order to deliver the requested material to the user. In addition, according to Capek, *"as evident from FIG. 4A, the client experiences a delay from time A through at least time F, and possibly through time I. During the*

interval from time F to time I, the user may be presented with results depending upon the specific technology and specific content for the particular instance" (Capek, col.10, lines 47-51). Capek also states that *"the client is presented with the insertion from at least time Z through time F, and perhaps from time X through time I, again depending upon the specific content and technology"* (Capek, col.10, lines 64-67). Hence, Capek anticipates that, during periods of delay in transferring the requested material to the user, the insertion manager may make determinations to deliver inserts of alternative data to the user.

Therefore, the Applicants still failed to clearly disclose the novelty of the invention and identify specific limitation, which would define patentable distinction over prior art.

Conclusion

13. **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

February 16, 2006

Jason D. Cardone

Supervisory PE (AU2145)

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
09/734,220	KAUFFMAN ET AL.
Examiner	**Art Unit**
Thomas Duong	2145

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date								
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CENTRAL FAX CENTER

NOV 18 2005

FACSIMILE COVER

To: Examiner Duong: A. U. 2487

From: Larry Cullen

U.S. Serial No.: 09/734,220

Phone: 215-323-1797

Facsimile No.: 571 273-8300

Date: November 18, 2005

Pages (including cover): 6

CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being filed by facsimile to Assistant Commissioner for Patents at 571 273-8300 on 11/18/05 by

Lawrence T. Cullen

Attorney Docket No.: D2487

NOV 18 2005

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Inventor: Marc W. Kauffman	Confirmation No.: 5436
U.S. Serial No.: 09/734,220	Customer No.: 000043471
Filed: December 11, 2000	Art Unit: 2145
	Examiner: Thomas Duong

Title: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

In response to the Office action mailed on August 26, 2005, having a three month shortened statutory period of response set to expire on November 26, 2005, please reconsider the above application as follows:

CERTIFICATE OF FACSIMILE
I hereby certify that this correspondence is being filed by facsimile to Assistant Commissioner for Patents at 571 273-8300
on 11/18/05 by
Lawrence T. Cullen

REMARKS

I. Introduction

Claims 1-3 are pending in the above application.

Claims 1-30 stand rejected under 35 U.S.C. § 102.

Claims 1, 2 and 21 are independent claims.

II. Rejections Under Prior Art

Claims 1-30 stand rejected under 35 U.S.C. § 102(c) as being unpatentable over Capek et al. (U.S. Pat. 6,094,677).

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, Akzo N.V. v. U.S. Int'l Trade Commission, 808 F.2d 1471 (Fed. Cir. 1986); Connell v. Sears, Roebuck & Co., 220 USPQ 193, 198 (Fed. Cir. 1983).

As explained in Applicant's prior response filed on July 5, 2005, Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file, as substantially recited by amended claims 1 and 21. Capek discloses to provide an insert during a delay of receiving requested data. Abs.; Figs. 4A and 4B. Capek discloses to maintain an insertion repository 22 which provides inserts to insertion manager 20, at which point insertions are made in a delay period. Fig. 2. Capek discloses to determine if an insert should be provided based on the sufficiency of the delay period, which may be determined by the actual delay seen or an expected delay

PAGE 3/6 * RCVD AT 11/18/2005 11:46:22 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/29 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):01-22

based on historical information. Col. 10: 52-68; and col. 11: 61 – col. 12: 24. Once the data is retrieved it is provided after the insert, i.e. when the insert is selectively provided with the data, the insert is provided at the beginning of the data – during the delay in retrieving the data. Figs. 3-7; col. 10: 29-51; col. 12: 47-55. Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.

However, with out explanation or rebuttal of Applicants explanation, the present Office action mailed on August 26, 2005 alleges that Capek discloses "the alternative media file is inserted in the stream independent of boundaries of the multimedia file (Capek, col. 5, lines 20-22, lines 41-52; col. 7, lines 49-52; col. 9, lines 6-24; col. 10, lines 18-28)." The Office action is simply mistaken on the disclosure of Capek. None of the cited portions of Capek remotely disclose or suggest the timing of an insert of an alternative media file in independent to the boundaries of a multimedia file stream, as required by the above claims. Particularly, column 5, lines 20-22 suggest to replace the insertion material with requested program material – i.e. apparently dealing with the content of the insertion. Column 5, lines 41-52 appears to be dealing with providing the insertion to an insertion manager, not with the timing of actually inserting the insertion material with respect to the boundaries of a multimedia file stream. Column 7, lines 49-52 is clearly dealing with the possible content and data format of insertion data, not with the timing of inserting the insertion data. Column 9, lines 6-24 is also dealing with the content of the insertion, stating that the insertion may include a control mechanism delivered to a client. Column 10, lines 18-28 is dealing with determining when the

PAGE 4/6 * RCVD AT 11/18/2005 11:46:22 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-6/29 * DNIS:2738300 * CSID:2153231300 * DURATION (mm-ss):01-22

insertion data should be forwarded based on "how long it will take to receive all or nearly all the data comprising the program material" which is clearly disclosed to be based on the "delay in retrieving the program material" discussed earlier in the same paragraph (col. 9, lines 54-28). Moreover, Capek clearly describes when the insertion should be made in the immediately following two paragraphs with reference to Figures 4A and 4B.

Accordingly, as explained in Applicant's previous response, Capek simply does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file. To the extent that the Examiner disagrees with Applicant's explanation, the Examiner is respectfully requested to explain the basis for any such disagreement.

Accordingly, as Capek does not disclose or suggest each and every element of amended claims 1 and 21 and hence does not anticipate amended claims 1 and 21. Likewise, as claims 3-20 and 22-30 depend on amended claims 1 and 21 respectively, and contain all of the limitations thereof, Capek also does not anticipate claims 3-20 and 22-30.

Capek also does not disclose using a control signal output from the cache which indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit, as recited by claim 2, amended to be in independent form. While the Office action cites to col. 7, lines 17-25 of Capek, Capek does not disclose the above features. Capek merely discloses to maintain an insertion repository 22 which contains all of the possible insertions from which a particular assertion is selected. Col. 7: 17-47. A repository 22 is not a cache

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memory, and there is no indication in Capek whether or not a particular insertion stored in the repository is ready for transmission. Capek clearly does not disclose or suggest to provide a control signal indicating that a complete alternative file is stored and is ready for transmission, or will be ready in time to transmit, as recited by claim 2. To the extent that the Examiner disagrees with Applicant, the Examiner is respectfully requested to explain the basis for such disagreement.

III. Conclusion

Having fully responded to the Office action, the application is believed to be in condition for allowance. Should any issues arise that prevent early allowance of the above application, the examiner is invited contact the undersigned to resolve such issues.

To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Date: 11/18/05

Respectfully submitted,

By: _____
Lawrence T. Cullen
Reg. No.: 44,489

Motorola Connected Home Solutions
101 Tournament Drive
Horsham, PA 19044
(215) 323-1797

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GOOGLE LLC / Page 132 of 321

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D02487	5436

43471 7590 08/26/2005

GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED
HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

EXAMINER	
DUONG, THOMAS	
ART UNIT	**PAPER NUMBER**
2145	

DATE MAILED: 08/26/2005

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

Office Action Summary	Application No.	Applicant(s)	
	09/734,220	KAUFFMAN ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2145	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance 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.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

2. Amendment received April 4, 2005 has been entered into record in response to the request for continued examination filed on July 5, 2005. *Claims 1-30* remain pending.

Response to Amendment

3. This office action is in response to the applicants Amendment filed on April 4, 2005. Applicant amended *claims 1-2 and 21. Claims 1-30* are presented for further consideration and examination.

Claim Rejections - 35 USC § 102

4. 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.

5. *Claims 1-30* are rejected under 35 U.S.C. 102(e) as being anticipated by Capek et al. (US006094677A).

6. With regard to *claims 1 and 21*, Capek discloses,

- *a first cache (insertion repository 22) for storing a received alternative media file;* (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2)
  Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.
- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2)
  Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client.
- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2)
  Capek teaches of an insertion manager that inserts data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client.
- *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first*

cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file in the stream (Capek, col.5, lines 20-22; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27).

- *wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.* (Capek, col.5, lines 20-22, lines 41-52; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

  Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words,

Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27). In addition, Capek teaches *"wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time may alternatively be based upon the amount of time required to retrieve the information from the second computer"* (Capek, col.5, lines 41-52). Hence, Capek teaches of inserting the alternate media file into the multimedia stream regardless of the stream since the insertion, as *"a complete insertion or elements of an insertion that can be used to generate a complete insertion dynamically"* (Capek, col.5, lines 14-16) can be done while waiting for the retrieval of

requested stream (i.e. during a network delay in the middle of transmitting the multimedia perhaps), before the transmission of the multimedia altogether, etc.

7. With regard to *claim 2*, Capek discloses,

- *a first cache (insertion repository 22) for storing a received alternative media file;* (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2)
  Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.
- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2)
  Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client.
- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2)
  Capek teaches of an insertion manager that inserts data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client.
- *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by*

said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file, (Capek, col.5, lines 20-22, lines 41-52; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

Capek includes a control mechanism that *"will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server"* (Capek, col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (Capek, col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (Capek, col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (Capek, col.10, lines 18-27). In addition, Capek teaches *"wherein an insertion is selectively transmitted to the first application if the amount of time required to retrieve the requested information is sufficient to transmit the insertion to the first application. The transmission of the retrieved application may, on the other hand, be preceded by waiting a preselected period of time. The preselected period of time may be based upon the insertion transmitted to the first application. The preselected period of time*

may alternatively be based upon the amount of time required to retrieve the information from the second computer" (Capek, col.5, lines 41-52). Hence, Capek teaches of inserting the alternate media file into the multimedia stream regardless of the stream since the insertion, as *"a complete insertion or elements of an insertion that can be used to generate a complete insertion dynamically"* (Capek, col.5, lines 14-16) can be done while waiting for the retrieval of requested stream (i.e. during a network delay in the middle of transmitting the multimedia perhaps), before the transmission of the multimedia altogether, etc.

- *wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit.* (Capek, col.7, lines 17-25, lines 39-47)

  Capek teaches of complete insertions of data to be delivered to the requested client.

8. With regard to *claims 3 and 22-23*, Capek discloses,

   - *wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user. or will be ready in time to transmit.* (Capek, col.7, lines 17-25, lines 39-47)

     Capek teaches of complete insertions of data to be delivered to the requested client.

9. With regard to *claims 4-9*, Capek discloses,

- *wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.* (Capek, col.9, lines 6-24)

  Capek teaches of a control mechanism that interacts with and control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client.

10. With regard to *claims 10-11*, Capek discloses,

- *wherein the alternative file is defined as an advertisement file.* (Capek, col.7, lines 17-25, lines 39-47; col.7, line 66 – col.8, line 10; col.8, lines 11-14)

  Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.

11. With regard to *claims 12-20*, Capek discloses,

- *wherein the arrangement is disposed at a local point of presence in a communication network.* (Capek, col.7, lines 26-37)

12. With regard to *claims 24-30*, Capek discloses,

- *wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.* (Capek, col.9, lines 6-24)

Capek teaches of a control mechanism that interacts with and control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client.

Response to Arguments

13. Applicant's arguments with respect to *claims 1-2 and 21* have been considered but are deemed not persuasive.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on 571/272-6159. The fax phone numbers for the organization where this application or proceeding is assigned are 703/872-9306 for regular communications and 703/872-9306 for After Final communications.

Thomas Duong (AU2145)

August 19, 2005

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
09/734,220	KAUFFMAN ET AL.
Examiner	**Art Unit**
Thomas Duong	2145

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date	Claim		Date	Claim		Date
Final	Original	8/19/05	Final	Original		Final	Original	
	1	√		51			101	
	2	√		52			102	
	3	√		53			103	
	4	√		54			104	
	5	√		55			105	
	6	√		56			106	
	7	√		57			107	
	8	√		58			108	
	9	√		59			109	
	10	√		60			110	
	11	√		61			111	
	12	√		62			112	
	13	√		63			113	
	14	√		64			114	
	15	√		65			115	
	16	√		66			116	
	17	√		67			117	
	18	√		68			118	
	19	√		69			119	
	20	√		70			120	
	21	√		71			121	
	22	√		72			122	
	23	√		73			123	
	24	√		74			124	
	25	√		75			125	
	26	√		76			126	
	27	√		77			127	
	28	√		78			128	
	29	√		79			129	
	30	√		80			130	
	31			81			131	
	32			82			132	
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	49			99			149	
	50			100			150	

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/734,220	12/11/2000	Marc W. Kauffman	D02487

CONFIRMATION NO. 5436

OC000000016504626

000043471
GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED HOME SOLUTIONS BUSINESS OF MOTOROLA, INC.
101 TOURNAMENT DRIVE
HORSHAM, PA 19044

Date Mailed: 07/12/2005

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/30/2005.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

KIDIST TESFAYE
SALLY ()-

OFFICE COPY

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/734,220	12/11/2000	Marc W. Kauffman	D2487

CONFIRMATION NO. 5436

OC000000016504607

27774
MAYER, FORTKORT & WILLIAMS, PC
251 NORTH AVENUE WEST
2ND FLOOR
WESTFIELD, NJ 07090

Date Mailed: 07/12/2005

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/30/2005.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

KIDIST TESFAYE
SALLY ()-

OFFICE COPY

OIPE JC1/30
JUL 05 2005
PATENT & TRADEMARK OFFICE

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Address to:
Mail Stop RCE
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Application Number	09/734,220
Filing Date	12/11/2000
First Named Inventor	Marc W. Kauffman
Group Art Unit	2145
Examiner Name	Duong, Thomas
Attorney Docket Number	D02487

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO).

1. Submission required under 37 C.F.R. 1.114 Note: if the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).
   a. [X] Previously submitted. If a final Office Action is outstanding, any amendments filed after the final Office Action may be considered as a submission even if this box is not checked.
      i. [ ] Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____.
      ii. [X] Other After Final Amendment filed 4/4/05
   b. [ ] Enclosed
      i. [ ] Amendment/Reply
      ii. [ ] Affidavit(s)/Declaration(s)
      iii. [ ] Information Disclosure Statement (IDS)
      iv. [ ] Other _____
2. [ ] Miscellaneous
   a. [ ] Suspension of Action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.117(i) required.)
   b. [ ] Other _____
3. [x] Fees The RCE fee under 37 C.F.R. 1.117 (e) is required by 37 C.F.R. 1.114 when the RCE is filed.
   a. [ ] The Director is hereby authorized to charge the following fees, or credit any overpayments, to Deposit Account No. **502117.** This page is submitted in duplicate.
      i. [ ] RCE fee required under 37 C.F.R. 1.17(e)
      ii. [X] Extension of time fee (37 C.F.R. 1.136 and 1.17)
      iii. [ ] Other _____
   b. [ ] Check in the amount of $ _____ enclosed..
   c. [ ] Payment by credit card (Form PTO-2038 enclosed)

SIGNATURE OF APPLICANT, ATTORNEY OR AGENT REQUIRED

Name (Printed/Type)	Lawrence T. Cullen	Reg. No.	44,489
Signature		Date	July 1, 2005

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U. S. Patent and Trademark Office on: July 1, 2005

Name Carol J. Smith Signature Carol J. Smith

07/06/2005 CCHAU1 00000078 502117 09734220
01 FC:1801 790.00 DA

OIPE JC190
JUL 05 2005
PATENT & TRADEMARK OFFICE

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)	Docket Number: D02487

In re Application of	MARC W. KAUFFMAN		
Application Number	09/734,220	Filed	12/11/2000
For	SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA		
Group Art Unit	2145	Examiner	DUONG, THOMAS

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and appropriate non-small-entity fee are as follows: (Check time period desired):

[ ]	One Month (37 CFR 1.17(a)(1))	$ 110.00
[ ]	Two Months (37 CFR 1.17(a)(2))	$ 430.00
[X]	Three Months (37 CFR 1.17(a)(3))	$ 980.00
[ ]	Four Months (37 CFR 1.17(a)(4))	$ 1530.00
[ ]	Five Months (37 CFR 1.17(a)(5))	$ 2080.00

[ ] Applicant claims small entity status. See 37 CFR 1.27. Therefore, the amount shown above is reduced by one-half, and the resulting fee is $ _____

[ ] A check in the amount of the fee is enclosed.

[ ] Payment by credit card. Form PTO-2038 is attached.

[X] The Commissioner has already been authorized to charge fees in this application to a Deposit Account.

[X] The Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to Deposit Account Number **502117** .

[X] I have enclosed a duplicate copy of this sheet.

I am the:

[ ] Applicant/inventor

[ ] Assignee of record of the entire interest. See 37 CFR 3.71.

[X] Attorney or agent of record (Registration No.: 44,489)

[ ] Attorney or agent under 37 CFR 1.34(a)
Registration number if acting under 37 CFR 1.34(a) «Registration_Number»

7/1/05
Date

Signature

Lawrence T. Cullen
Type or printed name

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

[X] Total of 2 form(s)are submitted

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first-class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on this date: July 1, 2005

Typed or printed name	Carol J. Smith
Signature	Carol J. Smith

07/06/2005 CCHAU1 00000078 502117 09734220
02 FC:1253 1020.00 DA

OIPE JC100 JUL 05 2005 PATENT & TRADEMARK OFFICE

REVOCATION OF POWER OF ATTORNEY AND APPOINTMENT OF NEW POWER OF ATTORNEY		
	Application Number	09/734,220
	Filing Date	12/11/2000
	First Named Inventor	Marc W. Kauffman
	Art Unit	2145
	Examiner Name	Duong, Thomas
	Attorney Docket Number	D02487

I hereby revoke all previous powers of attorney given in the above-identified application:

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint the practitioners at Customer Number : 000043471

☐ Please change the correspondence address for the above-identified application to:

☐ The address associated with Customer Number: 000043471

OR

☐ Firm or Individual Name Motorola, Inc.

Address 101 Tournament Drive
Address
City Horsham
State PA Zip 19044
Country United States of America
Telephone 215-323-1907 Fax 215-323-1300

I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record	
Name	Robert P. Marley, Assistant Secretary, General Instrument Corporation
Signature	
Date	July 1, 2005

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.36. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U>S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.**

OIPE JC1900 JUL 05 2005 PATENT & TRADEMARK OFFICE

STATEMENT UNDER 37 CFR 3.73 (b)

Applicant/Patent Owner: Marc W. Kauffman
Application No./Patent No.: 09/734,220 Filed/Issue Date: 12/11/2000
Entitled: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

General Instrument Corporation , a Corporation ,
(Name of Assignee) (Type of Assignee e.g., corporation, partnership, university, etc.)

states that it is:

1. [X] the assignee of the entire right, title, and interest; or
2. [ ] an assignee of less than the entire right, title and interest.
The extent (by, percentage) of its ownership interest is _____ %

In the patent application/patent identified above by virtue of either:

A. [X] An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 011613 , Frame 0103 , or for which a copy thereof is attached.

OR

B. [ ] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____ , Frame _____ or for which a copy thereof is attached.
2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____ , Frame _____ or for which a copy thereof is attached.
3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____ , Frame _____ or for which a copy thereof is attached.

[ ] Additional documents in the chain of title are listed on a supplemental sheet.

[ ] Copies of assignments or other documents in the chain of title are attached.
[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

July 1, 2005
Date

Robert P. Marley
Typed or printed name

Signature

Assistant Secretary
Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Alexandria, VA 22313. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SENT TO: Commissioner for Patents, Alexandria, VA 22313

OIPE JC13
JUL 05 2005
PATENT & TRADEMARK OFFICE

TMW
RCE

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in this Submission

Application Number	09/734,220
Filing Date	12/11/2000
First Named Inventor	Marc W. Kauffman
Group Art Unit	2145
Examiner Name	Duong, Thomas
Attorney Docket Number	D02487

ENCLOSURES (check all that apply)

- [x] Fee Transmittal Form
- [ ] Fee Attached
- [ ] Amendment/Reply
- [ ] After Final
- [ ] Affidavits/Declaration(s)
- [x] Extension of time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Documents
- [ ] Response to Missing Parts/ Incomplete Application
- [ ] Response to Missing Parts Under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers (for an Application)
- [ ] Drawing(s)
- [ ] Licensing-Related papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation, Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CDs
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
- [ ] Proprietary Information
- [ ] Status Letter with appropriate copies
- [x] Other Enclosure(s) (please identify below)
  - [ ] Response to Restriction Requirement
  - [ ] Associate Power of Attorney
  - [x] RCE
  - [ ] Copy of Notice to File Missing Parts

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Lawrence T. Cullen	Registration No.	44,489
Signature			
Date	7/1/05		

CERTIFICATE OF TRANSMITTAL/MAILING

I hereby certify that this correspondence is being facsimile transmitted to facsimile number _____ or deposited with the United States Postal Service with sufficient postage thereon, as first-class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on the date listed below:

Typed or printed name	Carol J. Smith		
Signature		Date	July 1, 2005

OIPE JC1390 JUL 05 2005 PATENT & TRADEMARK OFFICE

Effective on 12/08/2004

Fees pursuant to the Consolidated Appropriations Act. 2005 (H.R. 4818)

FEE TRANSMITTAL
For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($) 1770

Complete if Known	
Application Number	09/734,220
Filing Date	12/11/2000
First Named Inventor	Marc W. Kauffman
Examiner Name	Duong, Thomas
Group Art Unit	2145
Attorney Docket No.	D02487

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ None ☐ Other (please identify):_____

☒ Deposit Account Deposit Account Number: **502117** Deposit Account Name: **MOTOROLA, INC.**

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☒ Charge any additional fee(s) or underpayments of fee(s) ☒ Credit any overpayments under 37 CFR 1.16 and 1.17

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
		Small Entity		Small Entity		Small Entity	
Application Type	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee($)	Small Entity Fee ($)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims		Extra Claims		Fee ($)		Fee Paid ($)
	- 20 or HP=		x		=	

HP=highest number of total claims pad for, if greater than 20

Multiple Dependent Claims	
Fee($)	Fee Paid ($)

Indep. Claims		Extra Claims		Fee ($)		Fee Paid ($)
	- 3 or HP=		x		=	

HP=highest number of independent claims paid for, if greater than 3

3. APPLICATION SIZE FEE:

If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets		Extra Sheets		Number of each additional 50 or fraction thereof		Fee ($)		Fee Paid($)
	- 100 =		/50 =		(round up to a whole number) x			

4. OTHER FEE(S)

		Fee Paid ($)
3 Month Extension of Time	$980	
RCE Fee	$790	

SUBMITTED BY		Complete (if applicable)			
Name (Print/Type)	Lawrence T. Cullen	Registration No.	44,489	Telephone	215-323-1797
Signature		Date	7/1/05		

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MOTOROLA

FAX TRANSMITTAL SHEET

Motorola, Inc.
Intellectual Property Section
Law Department
101 Tournament Drive
Horsham, PA 19044

Telephone: 215-323-1907
Facsimile: 215-323-1300

3 Number of Pages (including this page)

Date: June 30, 2005

To: Examiner – DUONG, THOMAS Group: 2145

Location: United States Patent and Trademark Office

Fax No.: 703-872-9306

From: Attorney: Robert P. Marley - Registration No. 32,914

Subject: Serial No. 09/734,220 Inventor: Kauffman DOCKET NO: D02487

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MESSAGE:

Enclosed herewith, please find REVOCATION OF POWER OF ATTORNEY/APPOINTMENT OF NEW OWER OF ATTORNEY and Statement Under 37 CFR 3.37(b) for filing in the below-identified application.

PLEASE GIVE THESE PAPERS TO:

EXAMINER:	**DUONG, THOMAS**
GROUP ART UNIT:	2145
SERIAL NO.:	09/734,220
FILED:	12/11/2000
INVENTOR:	MARC KAUFMAN
ATTORNY DOCKET NO.:	D02487

REVOCATION OF POWER OF ATTORNEY AND APPOINTMENT OF NEW POWER OF ATTORNEY		
	Application Number	09/734,220
	Filing Date	12/11/2000
	First Named Inventor	Marc Kauffman
	Art Unit	2145
	Examiner Name	Duong, Thomas
	Attorney Docket Number	D02487

I hereby revoke all previous powers of attorney given in the above-identified application:

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint the practitioners at Customer Number : 000043471

☒ Please change the correspondence address for the above-identified application to:

☒ The address associated with Customer Number: 000043471

OR

☐ Firm or Individual Name Motorola, Inc.

Address 101 Tournament Drive

Address

City Horsham

State PA Zip 19044

Country United States of America

Telephone 215-323-1907 Fax 215-323-1300

I am the:

☐ Applicant/Inventor.

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Name	Robert P. Marley, Assistant Secretary General Instrument Corporation
Signature	
Date	June 30, 2005

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.36. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

PAGE 2/3 * RCVD AT 6/30/2005 11:47:29 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/3 * DNIS:8729306 * CSID: * DURATION (mm-ss):01-18

STATEMENT UNDER 37 CFR 3.73 (b)

Applicant/Patent Owner: Marc Kauffman, et al
Application No./Patent No.: 09/734,220 Filed/Issue Date: 12/11/2000
Entitled: Sesamless Arbitrary Data Insertion for Streaming Media

General Instrument Corporation (Name of Assignee), a Corporation (Type of Assignee e.g., corporation, partnership, university, etc.)

states that it is:

1. [X] the assignee of the entire right, title, and interest; or
2. [ ] an assignee of less than the entire right, title and interest.
The extent (by, percentage) of its ownership interest is _____ %

In the patent application/patent identified above by virtue of either:

A. [X] An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 011613 , Frame 0103 , or for which a copy thereof is attached.

OR

B. [ ] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____ , Frame _____ or for which a copy thereof is attached.
2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____ , Frame _____ or for which a copy thereof is attached.
3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____ , Frame _____ or for which a copy thereof is attached.

[ ] Additional documents in the chain of title are listed on a supplemental sheet.

[ ] Copies of assignments or other documents in the chain of title are attached.
[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

June 30, 2005
Date

Robert P. Marley
Typed or printed name

Signature

Assistant Secretary, General Instrument Corporation
Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Alexandria, VA 22313. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SENT TO: Commissioner for Patents, Alexandria, VA 22313

PAGE 3/3 * RCVD AT 6/30/2005 11:47:29 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/3 * DNIS:8729306 * CSID: * DURATION (mm-ss):01-18

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D2487	5436

27774 7590 04/19/2005

MAYER, FORTKORT & WILLIAMS, PC
251 NORTH AVENUE WEST
2ND FLOOR
WESTFIELD, NJ 07090

EXAMINER	
DUONG, THOMAS	
ART UNIT	**PAPER NUMBER**
2145	

DATE MAILED: 04/19/2005

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

PTO-90C (Rev. 10/03)

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 09/734,220	**Applicant(s)** KAUFFMAN ET AL.	
	Examiner Thomas Duong	**Art Unit** 2145	

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

THE REPLY FILED 04 April 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *Please see continuation sheet*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: *None*.
   Claim(s) objected to: *None*.
   Claim(s) rejected: *1-30*.
   Claim(s) withdrawn from consideration: *None*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

VALENCIA MARTIN-WALLACE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

Ex.1023
GOOGLE LLC / Page 157 of 321

Based on the amendment filed on April 4, 2005, the scopes of claims 1, 2, and 21 are changed and therefore would require further consideration and/or search. Specifically the scopes of dependent claims 3-20 and 22-30 are changed because of the amendment; hence requiring further consideration and/or search.

Ex.1023
GOOGLE LLC / Page 158 of 321

Attorney Docket No.: D2487

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

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APR 04 2005

Inventor: Marc W. Kauffman

U.S. Serial No.: 09/734,220

Filed: December 11, 2000

Confirmation No.: 5436

Customer No.: 000043471

Art Unit: 2145

Examiner: Thomas Duong

Title: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

In response to the Final Office action mailed on January 4, 2005 and remailed on January 18, 2005, having a three month shortened statutory period of response set to expire on April 18, 2005, please amend the above application as follows:

Please do not enter

CERTIFICATE OF FACSIMILE
I hereby certify that this correspondence is being filed by facsimile to Assistant Commissioner for Patents at 703 872-9306 on 4/4/05 by
Lawrence T. Cullen

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APR 04 2005

MOTOROLA
Broadband Communications Sector

Law Department
101 Tournament Drive
Horsham, PA 19044

FAX

Date: **April 4, 2005**
Number of pages including cover sheet: **13**

To: **United States Patent & Trademark Office**
Phone:
Fax:- **703.872-9306**
cc:

From: **Larry T. Cullen**
Sr. Intellectual Property Counsel
Phone: **215-323-1797**
Fax: **215-323-1300**

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REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please comment

Attorney Docket No.: D02487

U.S. Serial No.: 09/734,220

Attorney Docket No.: D2487

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

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APR 04 2005

Inventor: Marc W. Kauffman	)	Confirmation No.: 5436
	)	
	)	Customer No.: 000043471
U.S. Serial No.: 09/734,220	)	
	)	Art Unit: 2145
Filed: December 11, 2000	)	
	)	Examiner: Thomas Duong
	)	

Title: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

In response to the Final Office action mailed on January 4, 2005 and remailed on January 18, 2005, having a three month shortened statutory period of response set to expire on April 18, 2005, please amend the above application as follows:

CERTIFICATE OF FACSIMILE
I hereby certify that this correspondence is being filed by facsimile to Assistant Commissioner for Patents at 703 872-9306
on 4/4/05 by _____
Lawrence T. Cullen

In The Claims:

1. *(currently amended)* An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and

a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file in the stream,

wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file ~~at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file~~.

2. *(currently amended)* An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

PAGE 3/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and

a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file,

~~The arrangement as defined in claim 1~~ wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit.

3. *(original)* The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that an alternative file is available to be streamed to said first cache from an external server and is ready to begin transmission to the predetermined at least one end-user.

4. *(original)* The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.

PAGE 4/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

Ex.1023
GOOGLE LLC / Page 163 of 321

5. *(original)* The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the cached alternative file stored in said first cache in response to a signal from the control unit that an alternative file is ready to transmit.

6. *(previously presented)* The arrangement as defined in claim 1 wherein the control signal input to said control unit indicates that the alternative media file transfer to the predetermined at least one end-user is completed, the control unit thereafter supplying a switching output signal to said switching mechanism requesting said switching mechanism to supply as the output the cached streaming multimedia file from the second cache.

7. *(original)* The arrangement as defined in claim 1 wherein the arrangement further comprises a billing system coupled to the control unit for receiving information from said control unit regarding the identity of each alternative media file transmitted, the identity of the at least one end-user, and related statistics regarding the transmission of various alternative media files to a plurality of different end-users.

8. *(previously presented)* The arrangement as defined in claim 7 wherein the related statistics include the number of times each alternative media file was requested during a predetermined period of time.

PAGE 5/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

9. *(previously presented)* The arrangement as defined in claim 7 wherein the related statistics includes the time of day and date that each alternative media file was requested.

10. *(original)* The arrangement as defined in claim 1 wherein the alternative file is defined as an advertisement file.

11. *(original)* The arrangement as defined in claim 1 wherein the alternative file is defined as an emergency information file.

12. *(original)* The arrangement as defined in claim 1 wherein the arrangement is disposed at a local point of presence in a communication network.

13. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed at a headend location in an HFC communication network.

14. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a wide area data network and a local distribution network.

15. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and a DSL communication network.

PAGE 6/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

Ex.1023
GOOGLE LLC / Page 165 of 321

16. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and wireless communication network.

17. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed in a communications device at an end-user location.

18. *(original)* The arrangement as defined in claim 17 wherein the communications device comprises a set-top box.

19. *(original)* The arrangement as defined in claim 17 wherein the communications device comprises a residential gateway device.

20. *(original)* The arrangement as defined in claim 1 wherein the arrangement further comprises a rule server for retrieving information related to the predetermined at least one end-user and selecting the alternative media file based on said retrieved information and the specific content of the streaming multimedia file.

21. *(currently amended)* A method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user, the method comprising the steps of:

a) storing a selected alternative multimedia file in a first cache at a local point of presence;

PAGE 7/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

b) establishing a communication link between said streaming multimedia file and said predetermined end-user;

c) transmitting said streaming media file to said end-user;

d) switching transmission from said streaming multimedia file to said alternative media file stored in said first cache;

e) storing in a second cache said streaming multimedia file received during the transmission of said alternative media file; and

f) upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file,

wherein the alternative media file is inserted in the streaming multimedia independent of boundaries of the multimedia file.

22. *(original)* The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) receiving a request from a predetermined end-user for a streaming multimedia file;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

PAGE 8/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

Ex.1023
GOOGLE LLC / Page 167 of 321

23. *(original)* The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) detecting the start of a streaming multimedia flow;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

24. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.

25. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the beginning of said multimedia file.

26. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the end of said multimedia file.

PAGE 9/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

Ex.1023
GOOGLE LLC / Page 168 of 321

27. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at any location during transmission of said multimedia file.

28. *(original)* The method as defined in claim 21 wherein in performing step d), providing transition segments between the streaming multimedia file and the alternative file.

29. *(original)* The method as defined in claim 28 wherein the transition segments provide "fade in" and "fade out" between said files.

30. *(previously presented)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file based on a timing signal embedded in said streaming multimedia file.

PAGE 10/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

REMARKS

I. Introduction

Claims 1-3 are pending in the above application.

Claims 1-30 stand rejected under 35 U.S.C. § 102.

Claims 1, 2 and 21 are independent claims.

II. Amendments

Claims 1 and 21 have been amended to more distinctly and particulary point out what applicant regards as the invention therein.

Claim 2 has been rewritten in independent form.

No new matter has been added.

III. Rejections Under Prior Art

Claims 1-30 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Capek et al. (U.S. Pat. 6,094,677).

Anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed in a prior art reference as arranged in the claim. See, Akzo N.V. v. U.S. Int'l Trade Commission, 808 F.2d 1471 (Fed. Cir. 1986); Connell v. Sears, Roebuck & Co., 220 USPQ 193, 198 (Fed. Cir. 1983).

Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of

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boundaries of the multimedia file, as substantially recited by amended claims 1 and 21. Capek discloses to provide an insert during a delay of receiving requested data. Abs.; Figs. 4A and 4B. Capek discloses to maintain an insertion repository 22 which provides inserts to insertion manager 20, at which point insertions are made in a delay period. Fig. 2. Capek discloses to determine if an insert should be provided based on the sufficiency of the delay period, which may be determined by the actual delay seen or an expected delay based on historical information. Col. 10: 52-68; and col. 11: 61 – col. 12: 24. Once the data is retrieved it is provided after the insert, i.e. when the insert is selectively provided with the data, the insert is provided at the beginning of the data – during the delay in retrieving the data. Figs. 3-7; col. 10: 29-51; col. 12: 47-55. Capek does not disclose or suggest inserting an alternative media file into a streaming multimedia file using a first and second cache, a control unit, and a switching mechanism, wherein the alternative media file is inserted in the stream independent of boundaries of the multimedia file.

Accordingly, Capek does not disclose or suggest each and every element of amended claims 1 and 21 and hence does not anticipate amended claims 1 and 21. Likewise, as claims 3-20 and 22-30 depend on amended claims 1 and 21 respectively, and contain all of the limitations thereof, Capek also does not anticipate claims 3-20 and 22-30.

Capek also does not disclose using a control signal output from the cache which indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit, as recited by claim 2, amended to be in independent form. While the Office action cites to col. 7, lines

PAGE 12/13 * RCVD AT 4/4/2005 4:54:53 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:8729306 * CSID:215 323 1300 * DURATION (mm-ss):02-54

17-25 of Capek, Capek does not disclose the above features. Capek merely discloses to maintain an insertion repository 22 which contains all of the possible insertions from which a particular assertion is selected. Col. 7: 17-47. As repository 22 is not a cache memory, Capek is not concerned with whether the entire insertion is received by it before deciding to transmit the insertion, i.e. as the insertion is stored in the repository 22 the full extent of the insertion is already contained therein. Capek clearly does not disclose or suggest to provide a control signal indicating that a complete alternative file is stored and is ready for transmission, or will be ready in time to transmit, as recited by claim 2.

IV. Conclusion

Having fully responded to the Office action, the application is believed to be in condition for allowance. Should any issues arise that prevent early allowance of the above application, the examiner is invited contact the undersigned to resolve such issues.

To the extent an extension of time is needed for consideration of this response, Applicant hereby request such extension and, the Commissioner is hereby authorized to charge deposit account number 502117 for any fees associated therewith.

Date: April 4, 2005

Respectfully submitted,

By: _____
Lawrence T. Cullen
Reg. No.: 44,489

Motorola Connected Home Solutions
101 Tournament Drive
Horsham, PA 19044
(215) 323-1797

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/734,220	12/11/2000	Marc W. Kauffman	D2487

CONFIRMATION NO. 5436

OC000000015343631

OC000000015343631

27774
MAYER, FORTKORT & WILLIAMS, PC
251 NORTH AVENUE WEST
2ND FLOOR
WESTFIELD, NJ 07090

Date Mailed: 03/03/2005

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/14/2005.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

SANDRA R RANGE
2800 (571) 272-1609

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09/734,220	12/11/2000	Marc W. Kauffman	D2487

CONFIRMATION NO. 5436

Wendy W. Koba, Esq.
PO Box 556
Springtown, PA 18081

OC000000015343609
OC000000015343609

Date Mailed: 03/03/2005

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/14/2005.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

SANDRA R RANGE
2800 (571) 272-1609

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251 North Avenue West, 2nd Floor
Westfield, New Jersey 07090
Tel.: (908) 518-7700
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Mayer Fortkort & Williams PC
Attorneys At Law

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PATENT
Docket No.: D2487

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Inventors	: Marc W. Kauffman et al.
Serial No.	: 09/734,220
Filed	: 12/11/2000
For	: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA
Group Art Unit	: 2145
Examiner	: Thomas Duong

Via Facsimile: 703-746-7238
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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

POWER OF ATTORNEY AND REVOCATION OF PREVIOUS POWER

I declare that I am an official of, and empowered to act on behalf of the Assignee of the entire right, title and interest in the above-captioned application, General Instrument Corporation, 101 Tournament Drive, Horsham, PA 19044. General Instrument Corporation hereby revokes all prior powers of attorney in the above-captioned case, and hereby appoints the following attorneys associated with **Customer Number 27774** with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith:

PAGE 3/4 * RCVD AT 2/14/2005 10:11:07 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729302 * CSID:908 518 7795 * DURATION (mm-ss):01-12

Stuart H. Mayer (Reg. No. 35,277)
Karin L. Williams (Reg. No. 36,721)
Michael P. Fortkort (Reg. No. 35,141)
David B. Bonham (Reg. No. 34,297)
Heather L. Mansfield (Reg. No. 39,157)
Keum J. Park (Reg. No. 42,059)

Please address all communications regarding this application to:

Karin L. Williams
MAYER FORTKORT & WILLIAMS, PC
251 North Avenue West, 2nd Floor
Westfield, New Jersey 07090

Direct all telephone calls to Karin L. Williams at (908) 518-7700.

GENERAL INSTRUMENT CORPORATION

Signature : 

Name : Robert P. Marley

Title : Assistant Secretary

Date : February 7, 2005

PAGE 4/4 * RCVD AT 2/14/2005 10:11:07 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729302 * CSID:908 518 7795 * DURATION (mm-ss):01-12

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Attorneys At Law

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PATENT
Docket No.: D2487

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Inventors	: Marc W. Kauffman et al.
Serial No.	: 09/734,220
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For	: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA
Group Art Unit	: 2145
Examiner	: Thomas Duong

Via Facsimile: 703-746-7238
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Alexandria, VA 22313-1450

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I declare that I am an official of, and empowered to act on behalf of the Assignee of the entire right, title and interest in the above-captioned application, General Instrument Corporation, 101 Tournament Drive, Horsham, PA 19044. General Instrument Corporation hereby revokes all prior powers of attorney in the above-captioned case, and hereby appoints the following attorneys associated with Customer Number 27774 with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith:

PAGE 3/4 * RCVD AT 2/14/2005 11:43:01 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/4 * DNIS:8729302 * CSID:908 518 7795 * DURATION (mm-ss):01-18

Stuart H. Mayer (Reg. No. 35,277)
Karin L. Williams (Reg. No. 36,721)
Michael P. Fortkort (Reg. No. 35,141)
David B. Bonham (Reg. No. 34,297)
Heather L. Mansfield (Reg. No. 39,157)
Keum J. Park (Reg. No. 42,059)

Please address all communications regarding this application to:

Karin L. Williams
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251 North Avenue West, 2nd Floor
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Direct all telephone calls to Karin L. Williams at (908) 518-7700.

GENERAL INSTRUMENT CORPORATION

Signature : 

Name : Robert P. Marley

Title : Assistant Secretary

Date : February 7, 2005

PAGE 4/4 * RCVD AT 2/14/2005 11:43:01 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/4 * DNIS:8729302 * CSID:908 518 7795 * DURATION (mm-ss):01-18

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D2487	5436

7590 01/18/2005

Wendy W. Koba, Esq.
PO Box 556
Springtown, PA 18081

EXAMINER	
DUONG, THOMAS	
ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 01/18/2005

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

Office Action Summary	Application N .	Applicant(s)	
	09/734,220	KAUFFMAN ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2145	

-- The MAILING DATE of this communication appears on the cov r sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance 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.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on September 1, 2004. The amendment filed on September 1, 2004 has been entered and made of record. *Claims 1-30* are presented for further consideration and examination.

Response to Argument

2. The Applicants' arguments and amendments filed on September 1, 2004 have been fully considered, but they are not persuasive.

3. With regard to *claim 1*, the Applicants point out that:

   - *There is no "switching mechanism" in Capek et al. as defined in rejected independent claim 1.*

   However, the Examiner finds that the Applicants' arguments are not persuasive and maintains that the Capek reference does disclose,

   - *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the*

beginning and the end of the streaming multimedia file. (Capek, col.5, lines 20-22; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

Capek includes a control mechanism that "will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server" (col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (col.10, lines 18-27). Therefore, the Applicants still failed to clearly disclose the novelty of the invention and identify specific limitation, which would define patentable distinction over prior art.

4. With regard to *claim 21*, the Applicants point out that:

- *There is no "resumption" of transmission of the streaming multimedia file (step f) of claim 21) once the alternative file is finished in the Capek et al. arrangement, since the requested multimedia file is not accessed until the "advertisement" file is completed.*

However, the Examiner finds that the Applicants' arguments are not persuasive and maintains that the Capek reference does disclose,

- *upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file.* (Capek, col.5, lines 20-22; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

Capek includes a control mechanism that "will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server" (col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (col.5, lines 20-22). This replacing action can be interpreted as a resumption step to discontinue with the transmission of the alternative data and to resume the delivery of the requested data. Therefore, the Applicants still failed to clearly disclose the novelty of the invention and identify specific limitation, which would define patentable distinction over prior art.

5. With regard to *claims 2-20 and 22-30*, they are rejected at least by virtual of their dependency on the independent claims and by other reasons set forth in the previous office action. Accordingly, rejections for *claims 2-20 and 22-30* are presented as below:

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. *Claims 1-30* are rejected under 35 U.S.C. 102(e) as being anticipated by Capek et al. (US006094677A).

8. With regard to *claims 1 and 21*, Capek reference discloses,

- *a first cache (insertion repository 22) for storing a received alternative media file;* (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2)
  Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.
- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2)
  Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client.
- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2)
  Capek teaches of an insertion manager that inserts data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client.

- *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file.* (Capek, col.5, lines 20-22; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

Capek includes a control mechanism that "will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server" (col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (col.10, lines 18-27).

9. With regard to *claims 2-3 and 22-23*, Capek reference discloses,

- *wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user. or will be ready in time to transmit.* (Capek, col.7, lines 17-25, lines 39-47)

  Capek teaches of complete insertions of data to be delivered to the requested client.

10. With regard to *claims 4-9*, Capek reference discloses,

- *wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.* (Capek, col.9, lines 6-24)

  Capek teaches of a control mechanism that interact with and control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client.

11. With regard to *claims 10-11*, Capek reference discloses,

- *wherein the alternative file is defined as an advertisement file.* (Capek, col.7, lines 17-25, lines 39-47; col.7, line 66 – col.8, line 10; col.8, lines 11-14)

  Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.

12. With regard to *claims 12-20*, Capek reference discloses,

- *wherein the arrangement is disposed at a local point of presence in a communication network.* (Capek, col.7, lines 26-37)

13. With regard to *claims 24-30*, Capek reference discloses,

- *wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.* (Capek, col.9, lines 6-24)

  Capek teaches of a control mechanism that interact with and control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Thomas Duong (AU2145)

January 7, 2005

JACK B. HARVEY
SUPERVISORY PATENT EXAMINER

OIPE
AUG 27 2004
PATENT & TRADEMARK

PTO/SB/08a (05-03)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet | of

Complete if Known	
Application Number	09/734,920
Filing Date	December 11, 2000
First Named Inventor	Kauffman
Art Unit	2143
Examiner Name	Thomas Duong
Attorney Docket Number	D2487

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
TD		US- 6141010	10-31-2000	Hoyle	
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
TD		WO 99/55066 (A1)	10-28-1999	Zeimeir		

Examiner Signature		Date Considered	12/22/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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PTO/SB/08b (08-03)
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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet | | of | |

Complete if Known	
Application Number	09/734,220
Filing Date	December 11, 2000
First Named Inventor	Kauffman
Art Unit	2143
Examiner Name	Thomas Duong
Attorney Docket Number	Da487

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
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Examiner Signature		Date Considered	12/22/04

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Index of Claims

Applicati n No.	Applicant(s)	
09/734,220	KAUFFMAN ET AL.	
Examin r	Art Unit	
Thomas Duong	2145	

√	Rej ct d	–	(Through numeral) Cancelled	N	Non-Elect d	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date	Claim		Date	Claim		Date
Final	Original	12/22/04	Final	Original		Final	Original	
	1	√		51			101	
	2	√		52			102	
	3	√		53			103	
	4	√		54			104	
	5	√		55			105	
	6	√		56			106	
	7	√		57			107	
	8	√		58			108	
	9	√		59			109	
	10	√		60			110	
	11	√		61			111	
	12	√		62			112	
	13	√		63			113	
	14	√		64			114	
	15	√		65			115	
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	22	√		72			122	
	23	√		73			123	
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D2487	5436

7590 01/04/2005

Wendy W. Koba, Esq.
PO Box 556
Springtown, PA 18081

EXAMINER	
DUONG, THOMAS	

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 01/04/2005

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

Office Action Summary	Application No.	Applicant(s)	
	09/734,220	KAUFFMAN ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2145	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance 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.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on September 1, 2004. The amendment filed on September 1, 2004 has been entered and made of record. *Claims 1-30* are presented for further consideration and examination.

Response to Argument

2. The Applicants' arguments and amendments filed on September 1, 2004 have been fully considered, but they are not persuasive.

3. With regard to *claim 1*, the Applicants point out that:

   - *There is no "switching mechanism" in Capek et al. as defined in rejected independent claim 1.*

   However, the Examiner finds that the Applicants' arguments are not persuasive and maintains that the Capek reference does disclose,

   - *a switching mechanism, coupled to each one of said control unit, said first cache, said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the*

beginning and the end of the streaming multimedia file. (Capek, col.5, lines 20-22; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

Capek includes a control mechanism that "will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server" (col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (col.5, lines 20-22). Also, the *"insertion manager may then make a determination of how long to provide the insertion to the user before beginning to forward the buffered data to the client in order that the last byte of data is delivered at approximately the same time as it would have been if the data had been downloaded directly to the client"* (col.10, lines 18-27). Therefore, the Applicants still failed to clearly disclose the novelty of the invention and identify specific limitation, which would define patentable distinction over prior art.

4. With regard to *claim 21*, the Applicants point out that:

- *There is no "resumption" of transmission of the streaming multimedia file (step f) of claim 21) once the alternative file is finished in the Capek et al. arrangement, since the requested multimedia file is not accessed until the "advertisement" file is completed.*

However, the Examiner finds that the Applicants' arguments are not persuasive and maintains that the Capek reference does disclose,

- *upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file.* (Capek, col.5, lines 20-22; col.7, lines 49-52; col.9, lines 6-24; col.10, lines 18-28)

Capek includes a control mechanism that "will provide for the replacement of the insertion by the requested program material once the program material is received from the distribution server" (col.9, lines 11-13). In other words, Capek's control mechanism will replace the insertion data, which may be *"text, graphics, animation, motion video, sound, etc"* as well as *"the combination of data having different formats into a single insertion for providing a multimedia experience"* (col.7, lines 49-52), with the requested material once it is available. According to Capek, the control logic's function is to *"replaces the insertion with the requested program material after the program is retrieved"* (col.5, lines 20-22). This replacing action can be interpreted as a resumption step to discontinue with the transmission of the alternative data and to resume the delivery of the requested data. Therefore, the Applicants still failed to clearly disclose the novelty of the invention and identify specific limitation, which would define patentable distinction over prior art.

5. With regard to *claims 2-20 and 22-30*, they are rejected at least by virtual of their dependency on the independent claims and by other reasons set forth in the previous office action. Accordingly, rejections for *claims 2-20 and 22-30* are presented as below:

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. *Claims 1-30* are rejected under 35 U.S.C. 102(e) as being anticipated by Capek et al. (US006094677A).

8. With regard to *claims 1 and 21*, Capek reference discloses,

- *a first cache (insertion repository 22) for storing a received alternative media file;* (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2)
  Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client.
- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2)
  Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client.
- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2)
  Capek teaches of an insertion manager that inserts data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client.

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Thomas Duong (AU2145)

December 22, 2004

SUPERVISORY PATENT EXAMINER

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Art Unit	2143
Examiner Name	Thomas Duong
Attorney Docket Number	D2487

NON PATENT LITERATURE DOCUMENTS

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Examiner Signature		Date Considered	12/22/04

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet | of

Complete if Known	
Application Number	09/734,820
Filing Date	December 11, 2000
First Named Inventor	Kauffman
Art Unit	2143
Examiner Name	Thomas Duong
Attorney Docket Number	D2487

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
TD		US- 6141010	10-31-2000	Hoyle	
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
TD		WO 9955066 (A1)	10-28-1999	Zetmeir		

Examiner Signature	Thomas Duong	Date Considered	12/22/04

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Index of Claims

Applicati n N .	Applicant(s)
09/734,220	KAUFFMAN ET AL.
Examiner	**Art Unit**
Thomas Duong	2145

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=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date	Claim		Date	Claim		Date
Final	Original	12/22/04	Final	Original		Final	Original	
	1	√		51			101	
	2	√		52			102	
	3	√		53			103	
	4	√		54			104	
	5	√		55			105	
	6	√		56			106	
	7	√		57			107	
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D2487

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

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Inventor(s)	Marc W. Kauffman Jonathan Fellows		
Case	D2487	**Conf. No.**	5436
Serial No.	09/734,220	**Group Art Unit**	2143
Filing Date	December 11, 2000		
Examiner	Thomas Duong		
Title	**Seamless Arbitrary Data Insertion for Streaming Media**		

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SIR:

AMENDMENT

In response to an Office action dated June 1, 2004 (application Paper No. 6), please amend the above-identified application as follows:

PAGE 5/14 * RCVD AT 9/1/2004 10:31:33 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:610 346 8189 * DURATION (mm-ss):04-38

IN THE CLAIMS:

1. *(currently amended)* An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete alternative media file being stored in said first cache; and

a switching mechanism, ~~responsive~~ coupled to each one of said control unit, ~~switching output signal~~ said first cache, ~~and~~ said second cache and said streaming multimedia file for providing as an output, directed to the at least one end-user, a stream selected from one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit so as to insert the alternative media file at a predetermined location in the stream, including either one of the beginning and the end of the streaming multimedia file.

2. *(original)* The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit.

3. *(original)* The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that an alternative file is available to be streamed to said first cache from an external server and is ready to begin transmission to the predetermined at least one end-user.

4. *(original)* The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.

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5. *(original)* The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the cached alternative file stored in said first cache in response to a signal from the control unit that an alternative file is ready to transmit.

6. *(currently amended)* The arrangement as defined in claim 1 wherein the control signal input to said control unit indicates that the alternative media file transfer to the predetermined at least one end-user is completed, the control unit thereafter supplying a switching output signal to said switching mechanism requesting said switching mechanism to supply as the output the cached streaming multimedia file from the second cache.

7. *(original)* The arrangement as defined in claim 1 wherein the arrangement further comprises

a billing system coupled to the control unit for receiving information from said control unit regarding the identity of each alternative media file transmitted, the identity of the at least one end-user, and related statistics regarding the transmission of various alternative media files to a plurality of different end-users.

8. *(currently amended)* The arrangement as defined in claim 7 wherein the related statistics include the number of times each alternative media file ~~is~~ was requested during a predetermined period of time.

9. *(currently amended)* The arrangement as defined in claim 7 wherein the related statistics includes the time of day and date that each alternative media file ~~is~~ was requested.

10. *(original)* The arrangement as defined in claim 1 wherein the alternative file is defined as an advertisement file.

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GOOGLE LLC / Page 211 of 321

11. *(original)* The arrangement as defined in claim 1 wherein the alternative file is defined as an emergency information file.

12. *(original)* The arrangement as defined in claim 1 wherein the arrangement is disposed at a local point of presence in a communication network.

13. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed at a headend location in an HFC communication network.

14. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a wide area data network and a local distribution network.

15. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and a DSL communication network.

16. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and wireless communication network.

17. *(original)* The arrangement as defined in claim 12 wherein the arrangement is disposed in a communications device at an end-user location.

18. *(original)* The arrangement as defined in claim 17 wherein the communications device comprises a set-top box.

19. *(original)* The arrangement as defined in claim 17 wherein the communications device comprises a residential gateway device.

20. *(original)* The arrangement as defined in claim 1 wherein the arrangement further comprises a rule server for retrieving information related to the predetermined at

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least one end-user and selecting the alternative media file based on said retrieved information and the specific content of the streaming multimedia file.

21. *(original)* A method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user, the method comprising the steps of:

a) storing a selected alternative multimedia file in a first cache at a local point of presence;

b) establishing a communication link between said streaming multimedia file and said predetermined end-user;

c) transmitting said streaming media file to said end-user;

d) switching transmission from said streaming multimedia file to said alternative media file stored in said first cache;

e) storing in a second cache said streaming multimedia file received during the transmission of said alternative media file; and

f) upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file.

22. *(original)* The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) receiving a request from a predetermined end-user for a streaming multimedia file;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

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23. *(original)* The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) detecting the start of a streaming multimedia flow;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

24. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.

25. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the beginning of said multimedia file.

26. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the end of said multimedia file.

27. *(original)* The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at any location during transmission of said multimedia file.

28. *(original)* The method as defined in claim 21 wherein in performing step d), providing transition segments between the streaming multimedia file and the alternative file.

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29. *(original)* The method as defined in claim 28 wherein the transition segments provide "fade in" and "fade out" between said files.

30. *(currently amended)* The method as defined in claim 21 wherein in performing step d), switching from said streaming ~~streamlining~~ multimedia file to said alternative file based on a timing signal embedded in said streaming multimedia file.

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D2487

Remarks

Reconsideration of rejected claims 1-30 is respectfully requested.

In the Office action dated June 1, 2004 (application Paper No. 6), the Examiner objected to the drawings and rejected all pending claims 35 USC § 102(e). The Examiner's objection and rejection will be discussed below in the order appearing in the Office action.

Objection to the Drawings

The Examiner first objected to the drawings, stating that the "limitations of claim 1 must be shown or the feature(s) canceled from the claim(s)". In response, applicants believe that the drawings as submitted (and subsequently also shown in the formal drawings filed May 14, 2002) do indeed show every "limitation of claim 1". Referring to claim 1 and FIG. 3, there is illustrated in FIG. 3 a "first cache" 60, a "second cache" 62, a "control unit" 66 and a "switching mechanism" 67. Applicants believe that this illustration is more than sufficient to support the subject matter/features of pending claim 1. Applicants therefore respectfully request the Examiner to reconsider this objection and find the drawings as filed to be acceptable.

35 USC § 102(e) Rejection - Claims 1-30

The Examiner then rejected all pending claims 1-30 under 35 USC 102(e) as being anticipated by US Patent 6,094,677 (Capek et al). In particular, the Examiner cited Capek et al. as teaching "a first cache" (insertion repository 22), "a second cache" (server 26), "a control unit" (insertion manager 20), and "a switching mechanism" (specific element of Capek et al. not given).

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In response, applicants assert that there are distinct differences between the subject matter of Capek et al. and the subject matter of the present invention, where Capek et al. is limited in its teaching to "inserting" an advertisement stream to an end-user who is waiting for another file to download. There is no "decision" made in Capek et al. regarding the insertion of an alternative stream "before, during or after" a streaming multimedia file has been presented to an end-user. Indeed, the purpose of Capek et al. is to use the "waiting time" prior to the download to transmit an ad to the end-user. Such an "alternative multimedia file" would never be transmitted to an end-user after receiving the streaming the multimedia file, where this scenario is quite possible in the system and method of the present invention as defined by the rejected claims. Indeed, an alternative multimedia file may be inserted "during" the streaming process, with the real-time received multimedia file being cached and then transmitted once the alternative file is completed (see, for example, step e) of claim 22).

Referring to FIG. 3 of the present application, it is clear that the "switching mechanism" (switch 67) includes three separate inputs: streaming multimedia, a cached portion of the streaming multimedia, or a cached alternative multimedia file. Claim 1 has been amended to clearly state that there are three separate possibilities. Such is not the case with Capek et al. - either an advertisement file is "inserted" while a multimedia file is downloading or it isn't. There is no "switching mechanism" in Capek et al. as defined in rejected independent claim 1. There is no "resumption" of transmission of the streaming multimedia file (step f) of claim 21) once the alternative file is finished in the Capek et al. arrangement, since the requested multimedia file is not accessed until the "advertisement" file is completed.

Based on this discussion and the above-noted amendments to the pending claims, applicants assert that Capek et al. cannot be found to "anticipate" the subject matter of claims 1-30 - Capek et al. is clearly limited to inserting an advertisement in a communication line as a file is being downloaded for the end-user ("the insertion is presented to the client 24 during the delay while the program material is being retrieved from the server 26"; column 7, lines 23-25). Moreover, the "control mechanism" of

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Capek et al. is a software trigger available to the end-user to "control" the playing of the ad -- the control is not in the "network" and used to control transmission. Applicants therefore respectfully request the Examiner to reconsider this rejection and find all claims 1-30, as amended, to now be in condition for allowance.

Applicants believe that the case, in its present form, is now in condition for allowance and respectfully request an early and favorable response from the Examiner in that regard. If for some reason or other the Examiner does not agree that the case is ready to issue and that an interview or telephone conversation would further the prosecution, the Examiner is invited to contact applicant's attorney at the telephone number listed below.

Respectfully submitted,

Marc W. Kauffman
Jonathan Fellows

By: Wendy W. Koba
Wendy W. Koba
Reg. No. 30509
Attorney for applicant
610-346-7112

Date: 9/1/04

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Fax

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Company: USPTO–Office of Petitions | From: Wendy W. Koba

Attention: Thomas Duong | Pages including cover sheet: 14

Fax No.: 703-872-9306 | Date : September 1, 2004

Re: Serial No. 09/734,220

☑ Urgent ☐ Please review ☐ Please Comment ☐ Please Reply ☐ For your information

Case Name:	D2487
Serial Number:	09/734,220
Filing Date:	December 11, 2000
Examiner:	Thomas Duong
Title:	Seamless Arbitrary Data Insertion for Streaming Media

In response to non-final office action dated June 1, 2004 attached please find the following documents:

1. Transmittal Form (1 page)
2. Certificate of Transmission under 37 CFR 1.8 (1 page)
3. Claims as amended (1 page)
4. Amendment (10 pages)

Respectfully submitted,

Wendy W. Koba

Wendy W. Koba, Esq.

PTO/SB/21 (04-04)
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/734,220
Filing Date	December 11, 2000
First Named Inventor	Kauffman
Art Unit	2143
Examiner Name	Thomas Duong
Attorney Docket Number	D 2487

Total Number of Pages in This Submission

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☑ Amendment/Reply
- ☐ After Final
- ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
- ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
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- ☐ Status Letter
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Wendy W. Koba
Signature	Wendy W. Koba
Date	9/1/04

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Typed or printed name	Wendy W. Koba		
Signature	Wendy W. Koba	Date	9/1/04

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1. Fax Cover Sheet
2. Claims as Amended
3. Amendment

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CASE Kauffman D 2487
SERIAL NO. 09/734,220 GROUP ART UNIT 2143
FILED December 11, 2000
EXAMINER Thomas Duong
TITLE Seamless Arbitrary Data Insertion for Streaming Media

COMMISSIONER OF PATENTS
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Alexandria, VA 22313-1450

SIR

Enclosed is an amendment in the above-identified application:

[✓] No additional fee is required, as shown below.

CLAIMS AS AMENDED

	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDITIONAL FEE
TOTAL CLAIMS FOR FEE PURPOSES	30	MINUS	30	0	X $18	0
INDEPENDENT CLAIMS	2	MINUS	2	0	X $86	0
MULTIPLE DEPENDENT CLAIM(S) First presented with this amendment, if applicable					X$290	0
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						$ 0

Respectfully,

Wendy W. Koba

Wendy W. Koba
Reg. No. 30509
Attorney for Applicant(s)
610-346-7112

Date: 9/1/04



IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Patent Application

Inventor Marc W. Kauffman et al.

Case: D2487

Serial No. ***09/734,220*** Group Art Unit 2143

Filing Date December 11, 2000

Title: ***Seamless Arbitrary Data Insertion for Streaming Media***

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In accordance with 37 CFR 1.97(b), the enclosed Information Disclosure Statement is submitted for consideration in the above-identified application.

NO FEE IS REQUIRED.

Respectfully,

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Attorney for Applicant

Date: 8/25/04

Att: - Information Disclosure Statement

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Filing Date	December 11, 2000
First Named Inventor	Kauffman
Art Unit	2143
Examiner Name	Thomas Duong
Attorney Docket Number	D2487

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 6141010	10-31-2000	Hoyle	
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FOREIGN PATENT DOCUMENTS

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
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(54) Title: TELEPHONE CALL MANAGEMENT SOFTWARE AND INTERNET MARKETING METHOD

(57) Abstract

A telephone call management computer program that provides both call management features and long distance savings for telephone consumers and marketing and advertising services for sponsor companies that wish to advertise to the consumer is disclosed. The call management program is initially stored on a host computer (12) and is then downloaded upon request to user computers (22) along with advertisement banners selected by the sponsor companies. When used, the program automatically front–loads a long distance carrier's PIC code in front of all long distance calls made from theuser computers to permit consumers to automatically make long distance phone calls at discounted rates without memorizing numerous PIC codes and without continually shopping for the best long distance rate. The program also provides many enhanced telephone calling options and displays the banners and other advertising directly on the user computers (22) while the consumers use the program.

TELEPHONE CALL MANAGEMENT SOFTWARE AND INTERNET MARKETING METHOD

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

The present invention relates to telephone call management devices and Internet marketing methods. More particularly, the present invention relates to a telephone call management computer program that provides call management services and discounted long distance rates for consumers and marketing and advertising services for sponsor companies that wish to advertise their products and services to users of the program.

2. DESCRIPTION OF THE PRIOR ART

Long distance telephone service consumers typically select a single, primary long distance carrier such as AT&T, MCI, or Sprint for all of their long distance calls even though less expensive rates are available from these very same carriers and other lesser known carriers. Consumers may bypass their primary long distance carriers by dialing the PIC code of another carrier in front of the normal telephone number, but most consumers either don't know about this option, can't remember the PIC codes for any of the different long distance carriers, or don't have the time and expertise to continually shop for the most competitive long distance rates. A similar problem is expected to arise in the future if de-regulation of the local telephone service industry allows consumers to select their local access providers.

Many telephone consumers also purchase expensive telephone options such as call-waiting, caller ID, speed dial, call forwarding, call blocker, anonymous call rejection, and auto redial, from their telephone service providers and are often required to purchase equipment such as caller ID boxes to use with these services. These additional services cost the telephone companies very little to provide; however, consumers often pay steep monthly fees for the services. Despite the high costs, these enhanced services do not provide database management capabilities such as allowing consumers to create easily edited personal phone books and extensive listings of incoming calls.

In a related industry, the ever-increasing popularity and use of the Internet has created tremendous marketing potential for companies wishing to advertise and sell their products and services on the world wide web. Indeed, hundreds of thousands of websites have already been created in efforts to reach consumers, and tens of thousands more are being created weekly. However, this tremendous growth and use of the Internet has cluttered it and made it increasingly difficult for users to locate desired websites and for companies to attract consumers to their sites.

OBJECTS AND SUMMARY OF THE INVENTION

The present invention solves the above-described problems by providing a unique call management software program that combines the technologies of telecommunications, personal computing, and the Internet to provide both call management features and long distance savings to consumers and marketing and advertising services to sponsor companies that wish to advertise their products and services to users of the program. That is to say, the call management program and Internet marketing method of the present invention (1) permits consumers to automatically make long distance phone calls at discounted rates without memorizing numerous PIC codes or continually shopping for the best long distance rates, (2) provides the consumers, free of charge, many of the same enhanced telephone calling options that they previously had to pay for as well as additional, more powerful calling options, and (3) provides sponsor companies with a dramatically more effective way to place messages and advertisements in front of the consumers as they use the program.

BRIEF DESCRIPTION OF THE DRAWING FIGURES

A preferred embodiment of the present invention is described in detail below with reference to the attached drawing figures, wherein:

Fig. 1 is a schematic diagram of a typical computer and telecommunications network that may be used to implement the present invention;

Fig. 2 is a flow diagram illustrating the primary steps performed by the operator of the host computer to initially set up the method of the present invention;

Fig. 3 is a flow diagram illustrating the primary steps of the registration and setup of the call management program of the present invention;

Fig. 4 is a flow diagram illustrating the primary steps performed when a user places a telephone call using the call management program of the present invention;

Fig. 5 is a flow diagram illustrating the primary steps performed when a user accesses the Internet using the call management program of the present invention; and

Fig. 6 is a flow diagram illustrating the primary steps of the calendar features of the call management program of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to Fig. 1, the present invention is preferably implemented with a computer network 10 including a host computer 12, at least one billing computer 14 operated by a long distance carrier, a plurality of Internet website server computers 16,18 and/or telephones 20 operated by sponsor companies wishing to advertise and sell their products and services to consumers, and a plurality of user computers 22 (only one shown) that may be used to access the host computer, the long distance carrier computer, and the sponsor companies' computers and phones. The computers are all linked by a communications network 26 that handles Internet traffic.

The host computer 12, billing computer 14, and website server computer 16,18 may be any conventional microcomputers, minicomputers, or mainframe computers such as those manufactured by IBM, Sun, or Digital Equipment Corporation. Each of these computers includes memory, input and output ports, and a network connection and is programmed with conventional www server operating software for receiving, storing, retrieving, and transmitting data over the Internet as well as software described below for implementing the steps of the present invention.

The user computers 22, which are preferably personal computers such as IBM compatible microcomputers having Intel Pentium or equivalent-type microprocessors, each include a modem, memory, input and output ports, and a network connection and are also programmed with conventional www server operating software for receiving, storing, retrieving, and transmitting data over the Internet. Each user computer is preferably operated by Microsoft Windows 95 or equivalent operating software, is configured to have access to an Internet search engine such as Yahoo, and

includes a web browser program such as Netscape Navigator or Microsoft Windows Explorer and software for implementing the steps of the present invention as described below.

At least one telephone 24 is connected to the phone port of the modem of each of the user computers 22, and the modems are in turn connected to the Internet as illustrated. Additional phones and devices having microprocessors may also be used with the present invention as described below.

The communications network 26 is a conventional telecommunications network that carries Internet traffic and that includes a plurality of switches 28 and local exchange carriers 30. The network may also be a local area network, wide area network, wireless network, voice network, or any other conventional communication network capable of providing communication between the various computers illustrated in Fig. 1.

The call management program of the present invention is designed to be stored on the host computer 12 and then downloaded to the user computers 22 as described in more detail below. The program may be written in any conventional language that is compatible with Windows operating software; however, it is preferably a modified version of a commercially available call management program such as Intellect sold by the Clearwave Company of Ft. Collins, Colorado.

The call management program is configured to operate with the operating system of the user computers 22 to provide many of the calling options provided by telephone service providers along with additional, more powerful database management features. In more detail, when combined with a standard caller ID service, the call management program of the present invention provides: (1) visual and audible signals of incoming calls; (2) personalized rings that may be selected for different incoming calls; (3) re-dialing of the last dialed number; (4) storing of all incoming phone numbers for later call back; (5) the entry and display of 40 or more speed-dial numbers; (6) blocking of selected incoming calls; (7) the creation of personal phone books of hundreds of numbers; and (8) the addition of incoming phone numbers to the personal phone books.

In accordance with the present invention, the call management program also "front-loads" a PIC code of a particular, pre-selected long distance carrier or a

similar code for a pre-selected local access provider in front of all numbers that are dialed using the program's speed dial or phone list functions. To this end, the five or six digit PIC code of a selected long distance carrier or local access provider is stored in memory of the host computer 12 so that it can be downloaded to the user computers 22 and accessed by the call management program. The program "front-loads" the PIC code whenever a user makes a long distance call or front-loads a similar code for a local access provider whenever a user makes a local call from the personal phone list or speed dial list of one of the user computers. The program then transparently connects the call via the long distance carrier or local access provider associated with the PIC code, i.e., without requiring the user to remember and/or enter the PIC code. The PIC is preferably stored in a separate file in the host computer 12 and the user computers 22 that can be changed easily so that the operator of the host computer can periodically contract with different long distance carriers as described in more detail below.

The program also includes a calendar function that permits users to enter the dates of personal events and holidays such as birthdays, anniversaries, national holidays, appointments, etc. The program monitors the clock and calendar of the computer 22 and then displays reminders of the entered dates before the actual dates of the events. The program preferably continuously compares the dates entered for the events in the calendar to the computer's clock and calendar and then displays daily reminders of the events beginning approximately two weeks before each event. The program allows users to disable the reminders at anytime.

In accordance with the present invention and as described in more detail below, companies wishing to advertise to users of the call management program may sponsor the program by paying to have banners and other advertising downloaded to the user computers 22 along with the call management program. This enables the operator of the host computer 12 to provide the call management program to consumers free of charge. The sponsor companies may also select sound files such as .wav files selected from Windows 95 to accompany the opening and closing of their banners.

The sponsor companies also select dates, key words, URL addresses, and other triggering events and entries that will be used to trigger the display of their banners on the user computers 22. Once downloaded and installed on the user computers 22, the call management program displays the banners and other advertising only after

certain consumer activities. For example, a sponsor company that sells balloons or flowers may elect to have its banners pop up directly on the user computers along with the reminder for birthdays, anniversaries, etc., provided by the calendar function described above. This ensures that the banners are popped-up at the exact moment when consumers are reminded of their personal events and therefore considering purchasing items.

The program may also monitor the entry of keywords into search engines and the entry of URL addresses into the browsers of the user computers 22 and then compare these entered keywords and URL addresses to the keywords and URL addresses selected by the sponsor companies. When a match is found, the program displays the corresponding banners. This displays the banners directly on the user computers before the users connect to the Internet or complete a phone call.

Alongside the banners, the program also preferably displays a dial-through button that allows users to automatically call the sponsor company associated with the banner and a click-through button that allows users to automatically connect with the company's website. If a user clicks one of these buttons or otherwise selects to be connected to the sponsor company, the program automatically connects the user via the selected connection option so that the users can immediately contact the sponsor companies at the exact moment that they are considering making a purchase. Alternately, the host computer 12 may act as a proxy server so that when the users attempt to visit a sponsor company's website or call a sponsor company the communication is first routed through the host computer and then connected to the sponsor company. This permits the user computers 22 to automatically transmit tracking information described below directly to the host computer 12 each time consumers access a sponsor company's website or make a phone call to a sponsor company from one of the user computers.

To permit the operator of the host computer 12 to bill the sponsor companies for referrals, the call management program also either maintains a consumer database that tracks and records each time a user contacts one of the sponsor companies through the dial-through or click-through connection options or automatically transmits the information to the host computer each time a user contacts one of the sponsor companies. This allows the operator of the host computer to match the

connections to the sponsors' on-line and telephone orders so that the operator can bill the sponsor companies based on the number of times that consumers contact the sponsor companies through the call management program. The program also tracks and records the exact identity of the users.

The information in the consumer database may also be used to provide the operator with valuable marketing information. To this end, the program monitors the types of sites accessed and the frequency of telephone calls and Internet connections to create a marketing profile for each of the users. The information in the consumer database is periodically uploaded from the user computers 22 to the host computer 12 and distributed to the sponsor companies as described in more detail below. Alternately, the user computers 22 may automatically transmit this type of information directly to the host computer 12 each time consumers access a sponsor company's website or make a phone call to a sponsor company from one of the user computers.

To allow sponsors to periodically update their banners and to allow the operator of the host computer to periodically provide different PIC codes, the call management program is provided with an expiration feature that requires the users to re-register the program at pre-selected intervals. The program preferably expires approximately every month.

The implementation of the method of the present invention is best understood with reference to the flow diagrams in Figs. 2-6. As illustrated in step 200 of Fig. 2, the operator of the host computer 12 first contracts with one or more long distance carriers that are willing to provide a block of discounted long distance calling time. The operator then enters the PIC code(s) of these long distance carriers into a file on the host computer that can be read by or imported into the call management program. The operator also contracts with various sponsor companies that wish to display banners and other advertising on the user computers as depicted in step 202. The call management program and the banners are then loaded into the host computer as depicted in step 204.

Consumers are then encouraged through conventional advertising and other means to access the host computer 12 and download the call management program as depicted in 300 of Fig. 3. A large number of consumers are expected to access the host computer to receive the call management program because the

program is free and provides many desirable telephone options that consumers previously had to pay for (along with additional, more powerful options). Use of the computer program to make long distance calls will also reduce the consumers' phone bills because of the discounted long distance rates made available by the front loaded PIC codes.

Once a consumer has connected to the host computer 12, the computer displays introductory messages and instructions and prompts the entry of registration information as depicted in steps 302 and 304. The requested registration information includes information that is used to check the credit of the user and may also include profile information such as the sex, marital status, and income level of the consumer and other demographic information that may be useful to the sponsor companies.

During registration, consumers are also asked to consent to viewing advertising from the sponsor companies during their use of the call management program.

The host computer 12 then connects to the billing computers 14 of the long distance carrier to obtain credit approval for the consumer as depicted in steps 306 and 308. If the consumer's credit is approved with the long distance carrier, the host computer registers the consumer's phone number with the carrier as depicted in step 310 so that the consumer will receive the discounted long distance rates and so that the operator will receive credit for the consumer's use of the long distance carrier. Once a consumer has been registered, the call management software and the sponsors' banners are downloaded to the consumer as depicted in steps 312 and 314.

If the consumer contacted the host site to re-register or re-download the computer program, step 316 uploads the consumer database described above from the user computer to the host computer. Alternately, the host computer 12 may act as a proxy server as described above so that the user computers 22 automatically transmit the consumer database information directly to the host computer 12 each time consumers access a sponsor company's website or make a phone call to a sponsor company from one of the user computers.

Finally, the consumer is prompted to set up the call management program and to create his or her speed dial lists, phone books, calendars, etc., as depicted in step 318.

Fig. 4 illustrates the primary steps performed by the call management program when a consumer makes a phone call from a user computer 22. The consumer first selects a phone number from his or her dialer, speed-dial list or personal phone book as depicted in step 400. In step 402, the program determines whether the selected phone number is a long distance toll call. If it is not, the program connects the local or toll-free long distance call as depicted in step 404 and then loops to step 412. If the call is a long distance toll call, step 406 displays a notification to the consumer that the call will not be placed through the consumer's regular long distance carrier. The consumer may disable this notification after it is first displayed so that subsequent phone calls do not trigger the notification.

The program also allows the consumer to change his or her primary long distance carrier to the carrier associated with the pre-selected PIC code as depicted in step 408. If the user elects to change long distance carriers, the program sends an e-mail notice to the host computer 12 to effect the change.

The program may also provide instructions to the consumer on how to use the PIC code with other phones not connected to the computer 22. The present invention may also be used to load the PIC code in any type of microprocessor-based device such as a "smart phone".

The program next front-loads the pre-selected PIC code in front of the selected long distance toll call or the code for pre-selected local access provider in front of the selected local call and connects the call as depicted in step 410. While the calls in steps 404 and 410 are being connected, the program may also select and display banners and connection options. If the consumer clicks on one of the connection options before the call has been completed, the program can be configured to disconnect the call and instead connect the consumer to the sponsor company via the selected connection option.

After the calls and/or Internet connections have been completed, step 414 captures and stores the connection information in the consumer database or automatically transmits this type of information directly to the host computer 12. If the program is near its expiration date, step 416 prompts the consumer to re-register the software as described above.

Fig. 5 illustrates the primary steps performed by the call management program when a consumer uses his or her Internet browser and/or search engine. The program monitors the keywords and URL addresses entered by the consumer and compares them to the keywords and URL addresses selected by the sponsor companies in steps in 500 and 502. If a match is found, the program selects and displays the banner or banners that correspond to the entered keywords and/or URL addresses along with connection options as illustrated in steps 504 and 506. If the consumer clicks on one of the connection options, the program connects the consumer to the sponsor company as illustrated in step 508.

After the calls and/or Internet connections have been completed, steps 510 and 512 capture and store the connection information in the consumer database or automatically transmits this type of information to the host computer 12 and prompt the consumer to re-register the software as described above.

Fig. 6 illustrates the primary steps performed by the calendar feature of the call management program. The program periodically compares the dates of the events entered into the calendar to the computer's clock and date and displays reminders of the events as illustrated in steps 600 and 602. The program also selects banners that relate to the events and displays the banners and connection options alongside the reminders as illustrated in step 604. If the consumer clicks on one of the connection options, the program connects the consumer to the sponsor company as illustrated in step 606.

After the calls and/or Internet connections have been completed, steps 608 and 610 capture and store the connection information in the consumer database or automatically transmits this information to the host computer 12 and prompt the consumer to re-register the software as described above.

From the foregoing, it should be apparent that the present invention provides a unique call management software program that combines the technologies of telecommunications, personal computing, and the Internet to provide both call management features and long distance savings to telephone consumers and marketing and advertising services to sponsors of the program. Specifically, the call management program permits consumers to automatically make long distance phone calls at discounted rates without memorizing numerous PIC codes and without continually shopping for the best long distance rates and provides the consumers, free of charge,

many of the same enhanced telephone calling options that they previously had to pay for as well as additional, more powerful calling options.

Additionally, the display of the sponsor companies' banners during use of the call management program allows the sponsor companies to more effectively market their goods and services to telephone and Internet users. Because the banners are triggered by specific consumer activities and popped-up at the exact moment of purchase receptivity, they are more likely to elicit favorable responses. Moreover, because the banners are displayed directly on the user computers 22 before the consumers connect to the Internet or complete a phone call, they are separated from the thousands of other banners and advertisements on the Internet.

Although the invention has been described with reference to the preferred embodiment illustrated in the attached drawing figures, it is noted that equivalents may be employed and substitutions made herein without departing from the scope of the invention as recited in the claims. For example, although in the preferred embodiment the banners and other advertising provided by the sponsor companies are downloaded to the user computers 22 along with the call management program, the banners and advertising may also accompany other types of downloaded software programs and files such as graphics programs, news-reporting services, etc. The important aspect of the banners and advertising is that they "ride-along" with some type of program, data, or other information that consumers will be encouraged to download from the host computer 12.

Having thus described the preferred embodiment of the invention, what is claimed as new and desired to be protected by Letters Patent includes the following:

CLAIMS:

1. A computer-readable memory device having a computer program stored thereon for directing a computer to function as a telephone call management device, the computer program comprising:

means for receiving a list of phone numbers entered by a consumer;

means for displaying on the computer at least some of the entered phone numbers;

means for receiving and storing a PIC code associated with a selected telephone service provider;

means for permitting the consumer to select one of the displayed phone numbers for dialing;

means for front-loading the PIC code in front of the selected phone number and dialing the PIC code and selected phone number; and

means for periodically receiving a different PIC code from a location remote from the computer and from someone other than the consumer for use in subsequent dialing.

2. The computer-readable memory device as set forth in claim 1, the means for periodically receiving a different PIC code including-

means for prompting the consumer to access an Internet website to re-register the computer program, and

means for downloading the different PIC code from the Internet website during the re-registration.

3. The computer-readable memory device as set forth in claim 1, further including-

means for receiving a plurality of advertisements from sponsor companies,

means for displaying selected ones of the advertisements alongside the displayed phone numbers, and

means for periodically receiving updated advertisements from a location remote from the computer for subsequent displaying.

4. The computer-readable memory device as set forth in claim 3, the means for periodically receiving updated advertisements including-

means for prompting the consumer to access an Internet website to re-register the computer program, and

means for downloading the updated advertisements from the Internet website during the re-registration.

5. A computer-readable memory device having a computer program stored thereon for directing operation of a computer, the computer program comprising:

means for receiving a plurality of advertisements from sponsor companies;

means for prompting a consumer to enter dates of events;

means for selecting the advertisements that relate to each of the events;

means for displaying on the computer reminders of the events dates before the actual event dates; and

means for displaying alongside the reminders of the events the advertisements that relate to the events.

6. The computer-readable memory device as set forth in claim 5, further including means for periodically receiving updated advertisements from a location remote from the computer for subsequent displaying.

7. The computer-readable memory device as set forth in claim 6, the means for periodically receiving updated advertisements including-

means for prompting the consumer to access an Internet website to re-register the computer program, and

means for downloading the updated advertisements from the Internet website during the re-registration.

8. A computer-readable memory device having a computer program stored thereon for directing operation of a computer that has an Internet browser program stored thereon and that has access to an Internet search engine program, the computer program comprising:

means for receiving a plurality of advertisements from sponsor companies;

means for selecting key words that a consumer may enter into the search engine and URL addresses that the consumer may enter into the browser;

means for selecting the advertisements that relate to the key words that the consumer may enter into the search engine and the URL addresses that the consumer may enter into the browser;

means for monitoring the browser and the search engine to monitor the entry of the selected key words and URL addresses; and

means for displaying on the computer, when the consumer enters any of the selected key words and URL addresses, the advertisements that relate to the entered key words and URL addresses before the computer has been connected to the Internet.

9. The computer-readable memory device as set forth in claim 8, further including means for periodically receiving updated advertisements from a location remote from the computer for subsequent displaying.

10. The computer-readable memory device as set forth in claim 9, the means for periodically receiving updated advertisements including-

means for prompting the consumer to access an Internet website to re-register the computer program, and

means for downloading the updated advertisements from the Internet website during the re-registration.

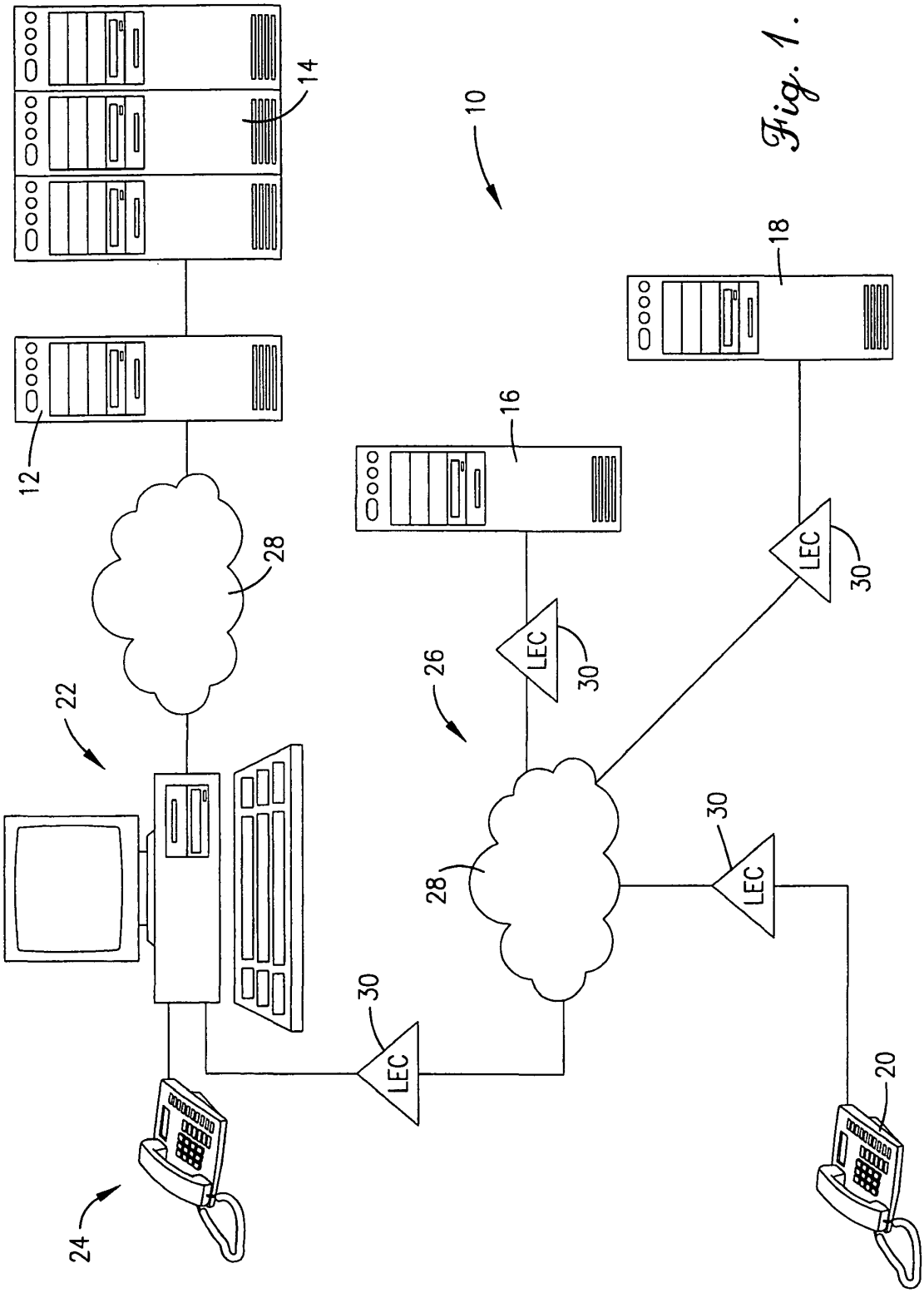


Fig. 1.

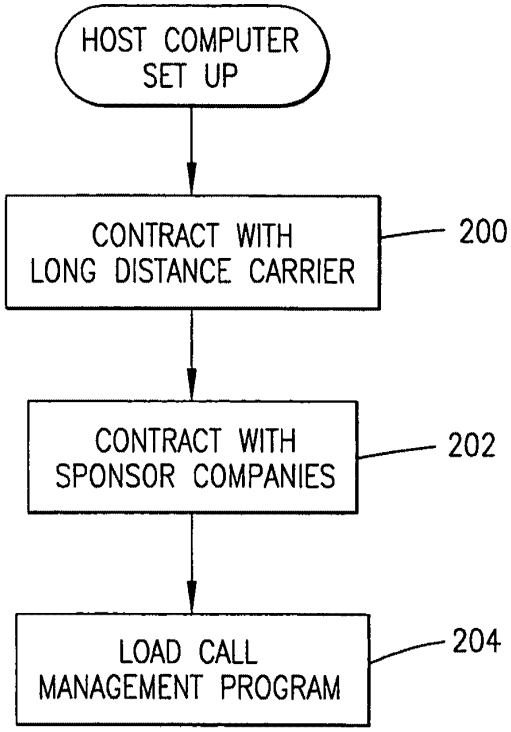

HOST COMPUTER SET UP
CONTRACT WITH LONG DISTANCE CARRIER
200
CONTRACT WITH SPONSOR COMPANIES
202
LOAD CALL MANAGEMENT PROGRAM
204

Fig. 2.

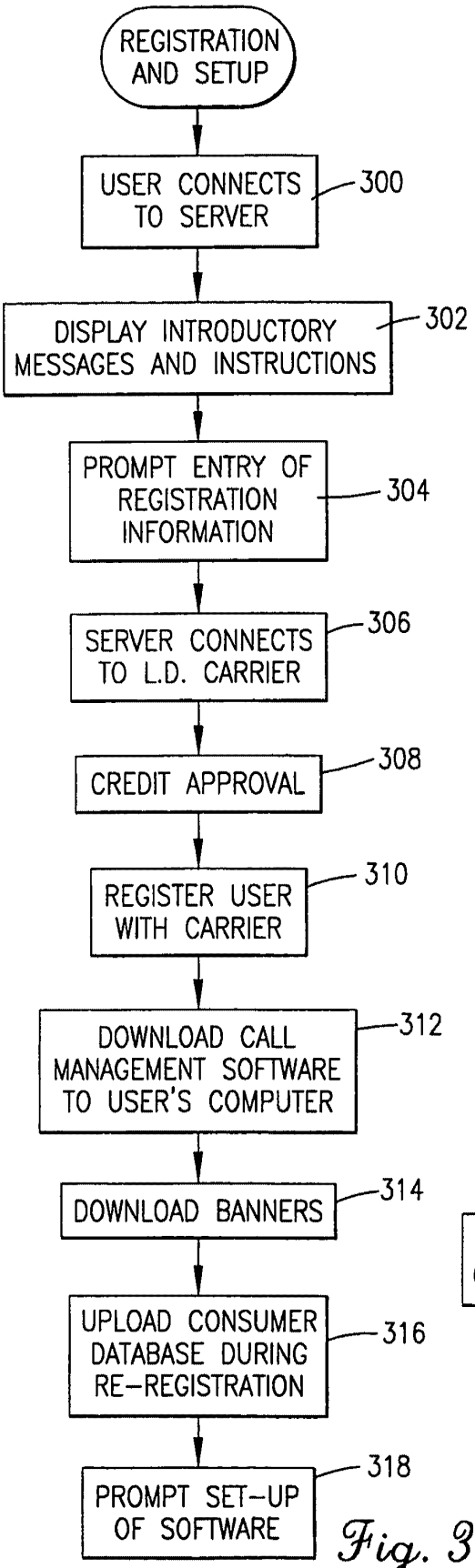

REGISTRATION AND SETUP
USER CONNECTS TO SERVER
300
DISPLAY INTRODUCTORY MESSAGES AND INSTRUCTIONS
302
PROMPT ENTRY OF REGISTRATION INFORMATION
304
SERVER CONNECTS TO L.D. CARRIER
306
CREDIT APPROVAL
308
REGISTER USER WITH CARRIER
310
DOWNLOAD CALL MANAGEMENT SOFTWARE TO USER'S COMPUTER
312
DOWNLOAD BANNERS
314
UPLOAD CONSUMER DATABASE DURING RE-REGISTRATION
316
PROMPT SET-UP OF SOFTWARE
318

Fig. 3.

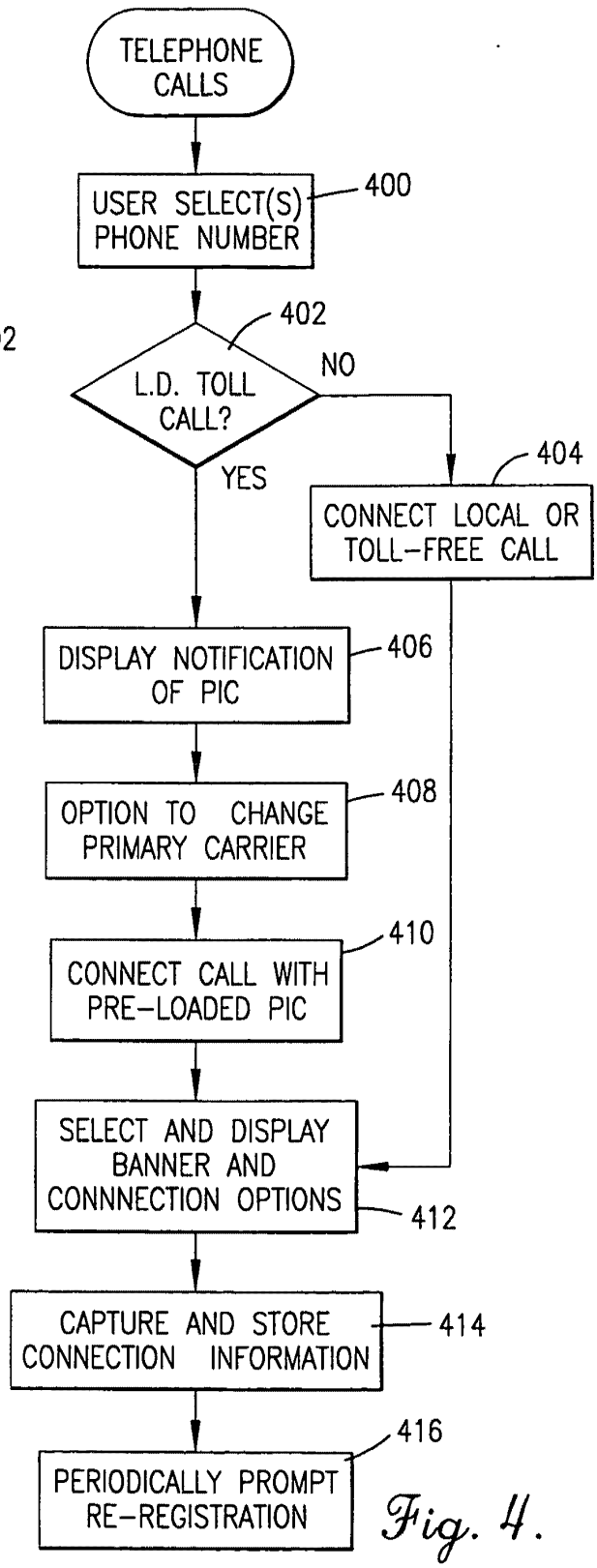

TELEPHONE CALLS
USER SELECT(S) PHONE NUMBER
400
L.D. TOLL CALL?
402
NO
YES
CONNECT LOCAL OR TOLL-FREE CALL
404
DISPLAY NOTIFICATION OF PIC
406
OPTION TO CHANGE PRIMARY CARRIER
408
CONNECT CALL WITH PRE-LOADED PIC
410
SELECT AND DISPLAY BANNER AND CONNNECTION OPTIONS
412
CAPTURE AND STORE CONNECTION INFORMATION
414
PERIODICALLY PROMPT RE-REGISTRATION
416

Fig. 4.

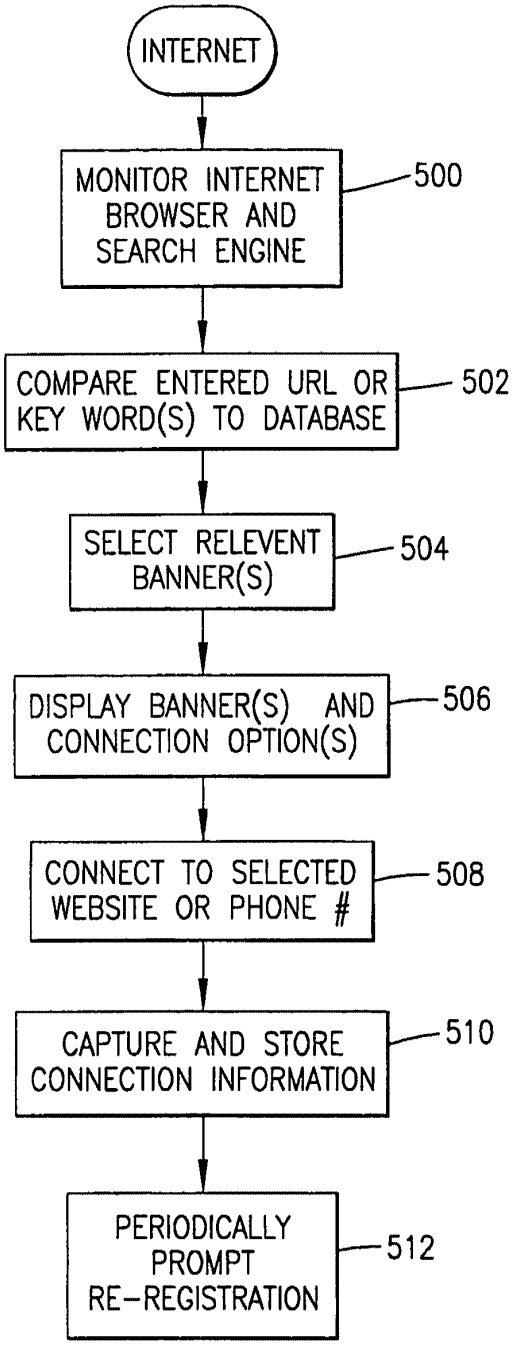

INTERNET
MONITOR INTERNET BROWSER AND SEARCH ENGINE
500
COMPARE ENTERED URL OR KEY WORD(S) TO DATABASE
502
SELECT RELEVENT BANNER(S)
504
DISPLAY BANNER(S) AND CONNECTION OPTION(S)
506
CONNECT TO SELECTED WEBSITE OR PHONE #
508
CAPTURE AND STORE CONNECTION INFORMATION
510
PERIODICALLY PROMPT RE-REGISTRATION
512

Fig. 5.

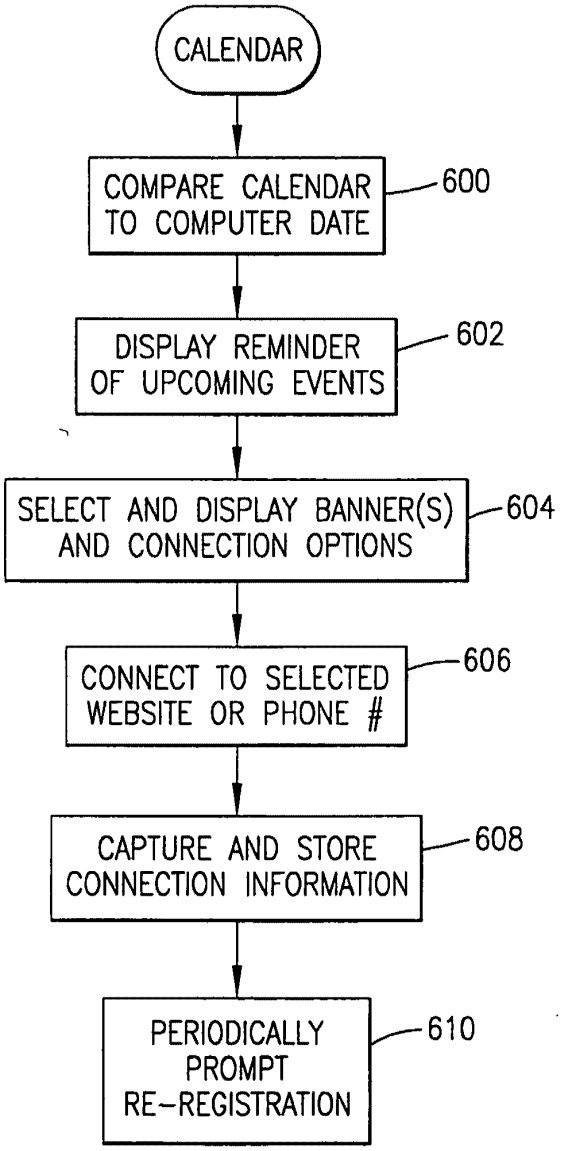

CALENDAR
COMPARE CALENDAR TO COMPUTER DATE
600
DISPLAY REMINDER OF UPCOMING EVENTS
602
SELECT AND DISPLAY BANNER(S) AND CONNECTION OPTIONS
604
CONNECT TO SELECTED WEBSITE OR PHONE #
606
CAPTURE AND STORE CONNECTION INFORMATION
608
PERIODICALLY PROMPT RE-REGISTRATION
610

Fig. 6.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/08102

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :H04M 3/00;
US CL :379/355, 354, 113, 114, 900, 904; 370/352, 401

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 379/355, 354, 113, 114, 88, 112, 144, 900, 904; 370/352, 401; 707, 3, 10

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,668,955 A (DECIUTIIS et al.) 16 September 1997, col. 2, lines 26-67, col. 3, lines52-67, col. 4, lines 1-24.	1-2
Y,P	US 5,742,596 A (BARATZ et al.) 21 April 1998, Figs. 1 and 3, col. 2, lines 43-62.	1-2
Y,P	US 5,864,604 A (MOEN et al.) 26 January 1999, Fig. 1, col. 6, lines 31-61.	1-2
Y	US 5,592,537 A (MOEN) 07 January 1997, col. 5, lines 24-60.	3-4
A,P	US 5,889,845 A (STAPLES et al.) 30 March 1999	3-4
A	US 5,533,103 A (PEAVEY et al.) 02 July 1996	1-4

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 25 JUNE 1999	Date of mailing of the international search report 07 OCT 1999
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer JACQUES M. SAINT-SURIN Joni Hill Telephone No. (703) 305-4760

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/08102

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,297,195 A (THORNE et al.) 22 March 1994	1-2
A	US 5,452,353 A (MENEZES) 19 September 1995	1-2
A,P	US 5,790,800 A (GAUVIN et al.) 04 August 1998	1-4
A	US 5,333,186 A (GUPTA) 26 July 1994	1-4
A	US 5,438,615 A (MOEN) 01 August 1995	1-4

Form PCT/ISA/210 (continuation of second sheet)(July 1992)*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/08102

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/08102

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING
This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claim(s) 1-4, drawn to computer functioning as telephone call management for automatic dialing.
Group II, claim(s) 5-10, drawn to management of distributed database data and file access and retrieval

The inventions listed as Groups I and II do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Group I is drawn to a computer readable memory device having a computer functioning as a telephone call management to provide automatic dialing is classified in class 379, subclass 355. Group II is drawn to a computer-readable memory device having a computer that has an internet browser program stored that has access to an Internet search engine program is classified in class 707, subclass 10. The inventions are different because the search required for Group I is not required for Group II and more specifically, the inventions are unrelated.

2143

41

PTO/SB/21 (04-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

OIPE
AUG 27 2004
PATENT & TRADEMARK

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/734,220
Filing Date	December 11, 2000
First Named Inventor	Kauffman
Art Unit	2143
Examiner Name	Thomas Duong
Attorney Docket Number	D2407
Total Number of Pages in This Submission	

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
- ☐ Fee Attached
- ☐ Amendment/Reply
- ☐ After Final
- ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☑ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
- ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
- ☐ After Allowance communication to Technology Center (TC)
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):

1. Return postcard

Remarks

RECEIVED
AUG 31 2004
Technology Center 2100

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Wendy W. Koba
Signature	Wendy W. Koba
Date	8/25/04

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Wendy W. Koba		
Signature	Wendy W. Koba	Date	8/25/04

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Wendy W. Koba, Esq.
P.O. Box 556
Springtown, Pennsylvania 18081

In re U.S. Patent of: Marc W. Kauffman et al.	)	
Application No. 09/734,220	)	
Filed: December 11, 2000	)	**NOTIFICATION OF**
U.S. Publication No. 2002/0073084	)	**IDENTIFICATION OF PRIOR**
Published: June 13, 2002	)	**ART IN LATE PROTEST**
For: SEAMLESS ARBITRARY DATA	)	**UNDER 37 C.F.R. § 1.291(a)**
INSERTION FOR STREAMING	)	
MEDIA	)	

The protest filed April 28, 2004 under 37 C.F.R. §1.291(a) was filed after the June 13, 2002, publication date of the application.

Because the protest was filed after publication of the application it is untimely and it is not being entered in the application file. The original protest is enclosed with this letter and the duplicate copy submitted by the protestor is being discarded . (MPEP § 1901.06)

If appropriate, Applicant may wish to consider submitting prior art from the protest pursuant to 37 C.F.R. §1.97 and 37 C.F.R. §1.56 during the prosecution of the application.

Pinchus M. Laufer
Special Programs Examiner
Technology Center 2100
Computer Architecture, Software, and Information Security
(703) 306-4160

Enc: Protest (4 pages)

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MAILED

AUG 12 2004

Wendy W. Koba, Esq.
P.O. Box 556
Springtown, Pennsylvania 18081

In re U.S. Patent of: Marc W. Kauffman et al.)
Application No. 09/734,220)
Filed: December 11, 2000)
U.S. Publication No. 2002/0073084)
Published: June 13, 2002)
For: SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA)

NOTIFICATION OF IDENTIFICATION OF PRIOR ART IN LATE PROTEST UNDER 37 C.F.R. § 1.291(a)

The protest filed April 28, 2004 under 37 C.F.R. §1.291(a) was filed after the June 13, 2002, publication date of the application.

Because the protest was filed after publication of the application it is untimely and it is not being entered in the application file. The original protest is enclosed with this letter and the duplicate copy submitted by the protestor is being discarded . (MPEP § 1901.06)

If appropriate, Applicant may wish to consider submitting prior art from the protest pursuant to 37 C.F.R. §1.97 and 37 C.F.R. §1.56 during the prosecution of the application.

Pinchus M. Laufer
Special Programs Examiner
Technology Center 2100
Computer Architecture, Software, and Information Security
(703) 306-4160

Enc: Protest (4 pages)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,220	12/11/2000	Marc W. Kauffman	D2487	5436

7590 06/01/2004

Wendy W. Koba, Esq.
PO Box 556
Springtown, PA 18081

EXAMINER	
DUONG, THOMAS	
ART UNIT	**PAPER NUMBER**
2143	

DATE MAILED: 06/01/2004

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

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	09/734,220	KAUFFMAN ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2143	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance 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.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of *claim 1* must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

   A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. Please provide drawings (such as state diagrams) showing the steps described in the specification. The objection to the drawings will not be held in abeyance.

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 1-30* are rejected under 35 U.S.C. 102(e) as being anticipated by Capek et al. (US006094677A).

4. With regard to *claims 1 and 21*, Capek reference discloses,

- *a first cache (insertion repository 22) for storing a received alternative media file;* (Capek, col.7, lines 17-25, lines 39-47; module 22, fig.2; Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client)
- *a second cache (server 26) for storing a streaming multimedia file;* (Capek, col.7, lines 17-25; module 26, fig.2; Capek teaches of a server that stores data (multimedia, program material, etc.) to be delivered to the requested client)
- *a control unit (insertion manager 20) for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete file being stored in said first cache; and* (Capek, col.7, lines 17-25, lines 39-47; module 20, fig.2; Capek teaches of an insertion manager that insert data (multimedia, advertisements, announcements, etc.) to be delivered to the requested client)
- *a switching mechanism (control mechanism), responsive to said control unit switching output signal, said first cache and said second cache for providing as an output, directed o the at least one end-user, a stream selected one of" said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit.* (Capek, col.9, lines 6-24; Capek teaches of a control mechanism that interact with and control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client)

5. With regard to *claims 2-3 and 22-23*, Capek reference discloses,

- *wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user. or will be ready in time to transmit.* (Capek, col.7, lines 17-25, lines 39-47; Capek teaches of complete insertions of data to be delivered to the requested client)

6. With regard to *claims 4-9*, Capek reference discloses,

   - *wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.* (Capek, col.9, lines 6-24; Capek teaches of a control mechanism that interact with and control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client)

7. With regard to *claims 10-11*, Capek reference discloses,

   - *wherein the alternative file is defined as an advertisement file.* (Capek, col.7, lines 17-25, lines 39-47; col.7, line 66 – col.8, line 10; col.8, lines 11-14; Capek teaches of an insertion repository that stores data (multimedia, advertisements, announcements, etc.) to be inserted in the data stream delivered to the requested client)

8. With regard to *claims 12-20*, Capek reference discloses,

   - *wherein the arrangement is disposed at a local point of presence in a communication network.* (Capek, col.7, lines 26-37)

9. With regard to *claims 24-30*, Capek reference discloses,

   - *wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.* (Capek, col.9, lines 6-24; Capek teaches of a control mechanism that interact with and

control the insertion of data (multimedia, advertisements, announcements, etc.) delivered to the requested client)

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Merriman et al. (US005948061A)
- Day et al. (US005996015A)

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 703/305-1886. The examiner can normally be reached on M-F 7:30AM - 4:00PM.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on 703/308-5221. The fax phone numbers for the organization where this application or proceeding is assigned are 703/872-9306 for regular communications and 703/872-9306 for After Final communications.
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/305-3900.

Thomas Duong (AU2143)

May 17, 2004

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Notice of References Cited	Application/Control No. 09/734,220	Applicant(s)/Patent Under Reexamination KAUFFMAN ET AL.	
	Examiner Thomas Duong	Art Unit 2143	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,094,677 A	07-2000	Capek et al.	709/219
	B	US-5,948,061 A	09-1999	Merriman et al.	709/219
	C	US-5,996,015 A	11-1999	Day et al.	709/226
	D	US-5,961,593 A	10-1999	Gabber et al.	709/219
	E	US-6,516,338 B1	02-2003	Landsman et al.	709/203
	F	US-5,983,267 A	11-1999	Shklar et al.	709/217
	G	US-6,606,644 B1	08-2003	Ford et al.	709/203
	H	US-6,266,681 B1	07-2001	Guthrie, John	715/501.1
	I	US-6,564,243 B1	05-2003	Yedidia et al.	709/203
	J	US-6,477,575 B1	11-2002	Koeppel et al.	709/224
	K	US-6,138,142 A	10-2000	Linsk, Steven J.	709/203
	L	US-6,496,857 B1	12-2002	Dustin et al.	709/219
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet | | of |

Complete if Known	
Application Number	09/734,220
Filing Date	12/11/00
First Named Inventor	Kauffman
Group Art Unit	2171
Examiner Name	Not yet assigned
Attorney Docket Number	D2487

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
VD		5586264		Belknap	12/17/1996	
VD		5761417		Henley et al.	06/02/1998	
VD		5805821		Saxena et al.	09/08/1998	
VD		5948061		Merriman et al.	09/07/1999	
VD		5996015		Day et al.	11/30/1999	
VD		6094677		Capek et al.	07/25/2000	

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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	5/17/04

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

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet | | of |

Complete if Known	
Application Number	09/734,220
Filing Date	12/11/00
First Named Inventor	Kauffman
Group Art Unit	~~2111~~ 2143
Examiner Name	Not yet assigned
Attorney Docket Number	D2487

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
JD		5586264		Belknap	12/17/1996	
JD		5761417		Henley et al.	06/02/1998	
JD		5805821		Saxena et al.	09/08/1998	
JD		5948061		Merriman et al.	09/07/1999	
JD		5996015		Day et al.	11/30/1999	
JD		6094677		Capek et al.	07/25/2000	

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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	5/17/04

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

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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L Number	Hits	Search Text	DB	Time stamp
1	9	("6496857" "6138142" "6477575" "6564243" "5961593" "6266681" "6606644" "5983267" "6516338").pn.	USPAT	2004/05/17 19:05
-	6	("5586264" "5761417" "5805821" "5948061" "5996015" "6094677").pn.	USPAT	2004/05/16 18:28
-	530	709/231.ccls.	USPAT	2004/05/16 17:44
-	8	((stream$6 near6 (media$6 multime$6 audio$6 video$6)) with (alternat$6 with comple$6))	USPAT	2004/05/16 17:54
-	2854	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) with (alternat$6))	USPAT	2004/05/16 17:55
-	2364	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) near12 (alternat$6))	USPAT	2004/05/16 17:55
-	56	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) with (alternat$6 with comple$6))	USPAT	2004/05/16 17:58
-	560	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) near12 (alternat$6)) and ((comple$6 same (switch$6 manag$6)))	USPAT	2004/05/16 18:24
-	21	("4879849" | "4895376" | "5083271" | "5333272" | "5498003" | "5522018" | "5555354" | "5608850" | "5633993" | "5662526" | "5680524" | "5702307" | "5734805" | "5736982" | "5737619" | "5764912" | "5850225" | "5854897" | "5862337" | "5919045" | "5978841").PN.	USPAT	2004/05/16 18:06
-	11	6094677.URPN.	USPAT	2004/05/16 18:08
-	92	((stream$6 near6 (media$6 data$6 multime$6 audio$6 video$6)) near12 (alternat$6)) and ((comple$6 same (switch$6 manag$6))) and bill$6	USPAT	2004/05/16 18:25
-	4	(("5586264" "5761417" "5805821" "5948061" "5996015" "6094677").pn.) and bill$6	USPAT	2004/05/16 18:28

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MAY 1 6 2002
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#5
T.D.
04/27/04

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Patent Application

Inventors: Marc W. Kauffman
Jonathan Fellows

Case No. D2487

Serial No. *09/734, 220*

Filing Date 3/21/01

Title: ***Seamless Arbitrary Data Insertion for Streaming Media***

Attention: Official Draftperson

COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

SUBMITTAL OF FORMAL DRAWINGS

Enclosed please find two(2) sheets of Formal drawings for the above-identified application. Applicants believe that these drawings are in accordance with the requirements of PTO-1474. However, if the Official Draftperson determines that any changes are needed, he is requested to contact the undersigned to avoid any delay in the prosecution of this application.

Respectfully,
By: Wendy W. Koba
Wendy W. Koba, Esq.
Reg. No. 30509
Attorney for Application

Date: 4/23/02

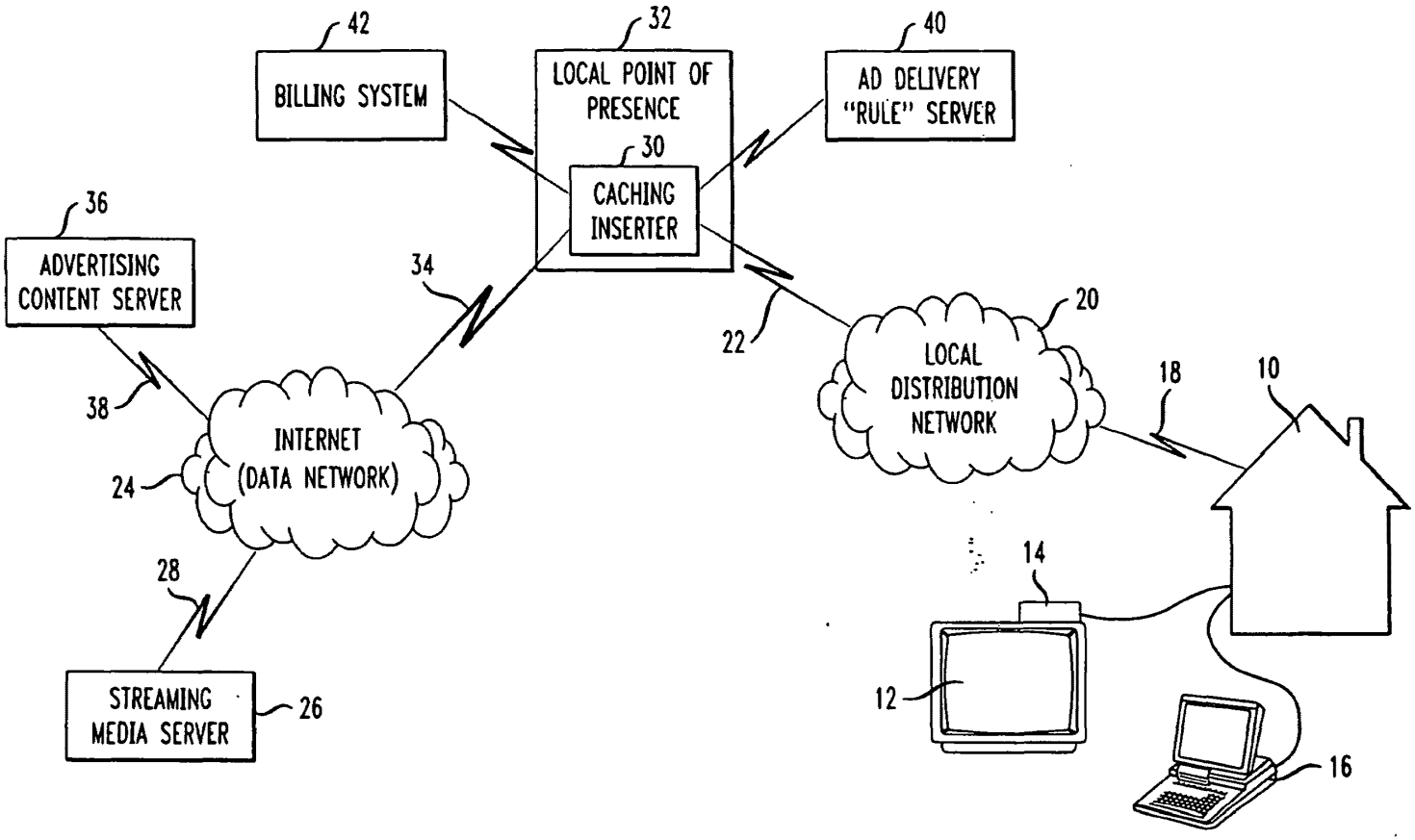
Att: - Formal Drawings (2 sheets)

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FIG. 1



Seamless Arbitrary Data Insertion For Streaming Media
D2487
Serial No.: 09/734,220
W. W. Kobo (610) 346-7112
1/2

FIG. 2

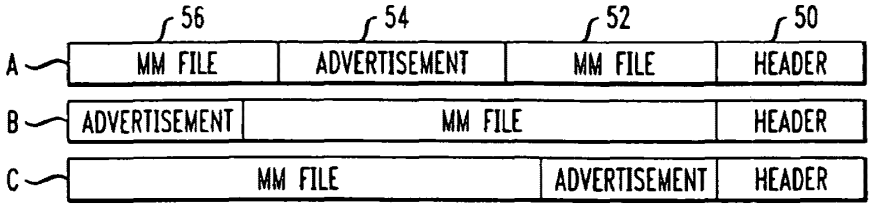
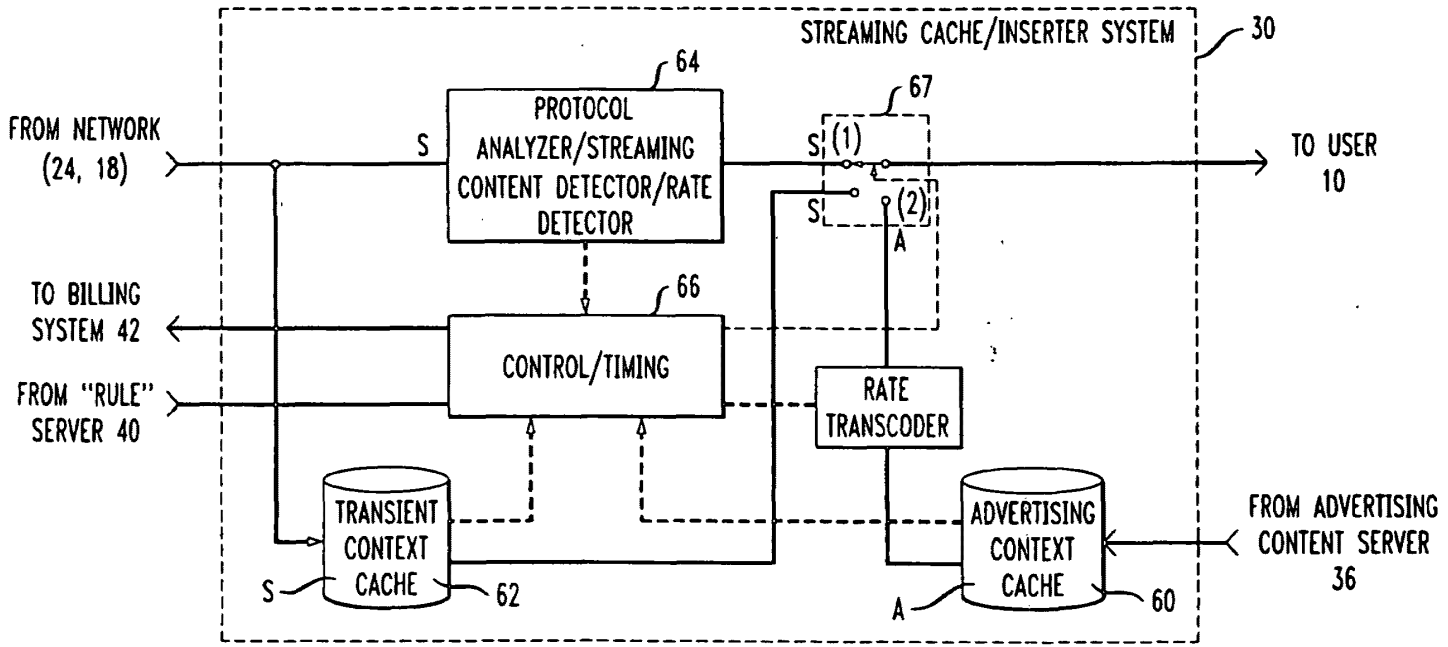


FIG. 3

(SYSTEM HANDLES MULTIPLE THREADS SIMULTANEOUSLY)
(SCALES TO ACCOMMODATE ANTICIPATED TRAFFIC LOAD)



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3-22-01 Sector 4

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/734,220
Filing Date	12/11/00
First Named Inventor	Kauffman
Group Art Unit	2171
Examiner Name	Not yet assigned
Attorney Docket Number	D 2487

Total Number of Pages in This Submission

ENCLOSURES *(check all that apply)*

- [X] Fee Transmittal Form
  - [X] Fee Attached
- [ ] Amendment / Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [X] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [X] Assignment Papers *(for an Application)*
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [X] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- [ ] Proprietary Information
- [ ] Status Letter
- [X] Other Enclosure(s) *(please identify below)*:
  ① Return receipt postcard
  ② Notice to file missing parts

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Wendy W. Koba, Esq.
Signature	Wendy W. Koba
Date	3/21/01

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as ~~first class~~ express mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: 3/21/01

Typed or printed name	Wendy W. Koba, Esq.		
Signature	Wendy W. Koba	Date	3/21/01

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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT ($) 170.00

Complete If Known	
Application Number	09/734,220
Filing Date	12/11/00
First Named Inventor	Kauffman
Examiner Name	Not yet assigned
Group Art Unit	2171
Attorney Docket No.	D 2487

METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:
   Deposit Account Number
   Deposit Account Name
   ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
   ☐ Applicant claims small entity status. See 37 CFR 1.27
2. ☒ Payment Enclosed:
   ☒ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	710	201	355	Utility filing fee	
106	320	206	160	Design filing fee	
107	490	207	245	Plant filing fee	
108	710	208	355	Reissue filing fee	
114	150	214	75	Provisional filing fee	

SUBTOTAL (1) ($) 0

2. EXTRA CLAIM FEES

	Extra Claims		Fee from below	Fee Paid
Total Claims		-20** =		x =
Independent Claims		- 3** =		x =
Multiple Dependent				=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	80	202	40	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim, if not paid
109	80	209	40	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 0

*or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	130.00
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for *ex parte* reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	390	216	195	Extension for reply within second month	
117	890	217	445	Extension for reply within third month	
118	1,390	218	695	Extension for reply within fourth month	
128	1,890	228	945	Extension for reply within fifth month	
119	310	219	155	Notice of Appeal	
120	310	220	155	Filing a brief in support of an appeal	
121	270	221	135	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,240	241	620	Petition to revive - unintentional	
142	1,240	242	620	Utility issue fee (or reissue)	
143	440	243	220	Design issue fee	
144	600	244	300	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	130	123	130	Petitions related to provisional applications	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	40.00
146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))	
179	710	279	355	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) ($) 170.00

SUBMITTED BY				Complete (if applicable)	
Name (Print/Type)	Wendy W. Koba Esq.	Registration No. (Attorney/Agent)	30509	Telephone	610-346-7112
Signature	Wendy W. Koba			Date	3/21/01

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

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WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/734,220	12/11/2000	Kauffman	D2487

CONFIRMATION NO. 5436

FORMALITIES LETTER

OC000000005703035

Wendy W. Koba, Esq.
PO Box 556
Springtown, PA 18081

Date Mailed: 02/05/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

- **The balance due by applicant is $ 130.**

A copy of this notice MUST be returned with the reply.

Customer Service Center
Initial Patent Examination Division (703) 308-1202
PART 2 - COPY TO BE RETURNED WITH RESPONSE

03/23/2001 AWONDAF1 00000033 09734220
01 FC:105 130.00 OP



IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Inventors:	Marc W. Kauffman Jonathan Fellows
Case	D2487
Serial No.	**09/734,220** **Filed** 12/11/00
Examiner	**Not Yet Assigned** **Group Art Unit** 2171
Title	Seamless Arbitrary Data Insertion for Streaming Media

COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

SUBMISSION OF MISSING PARTS OF APPLICATION UNDER 37 C.F.R. 1.53

This is in response to a NOTICE OF MISSING PARTS OF APPLICATION dated February 5, 2001. Enclosed are the following items for filing in the above-referenced application:

1. Declaration and Power of Attorney, executed by the applicants on March 7, 2001 and February 17, 2001 respectively.
2. Assignment Recordation Cover Sheet
3. Assignment and Agreement, executed by the applicants on March 7, 2001 and March 17, 2001 respectively.
4. Response copy of NOTICE OF MISSING PARTS OF APPLICATION.

A check in the amount of **$170.00** accompanies this response as payment for both the SURCHARGE of **$130.00** for late filing of the above document as well as a payment of **$40.00** for recordation of the Assignment.

Having now complied with all of the requirements of 37 CFR 1.53, applicants respectfully request that this application be placed upon the files for examination.

Respectfully submitted,

Marc W. Kauffman
Jonathan Fellows

By: Wendy W. Koba
Wendy W. Koba
Attorney for applicants
Reg. No. 30509
610-346-7112

Date: 3/21/01

Ex.1023
GOOGLE LLC / Page 269 of 321



EXPRESS MAIL
CERTIFICATE OF MAILING

Patent Application for:

Applicants: Marc. W. Kauffman
Jonathan Fellows

Atty. No: D 2487

Title: Seamless Arbitrary Data Insertion for Streaming Media

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Commissioner for Patents
Washington, D.C. 20231

On 3/21/01

EXPRESS MAIL TRACKING NO. EF172632469 US

Type or Print name of person signing this certificate: Wendy W. Koba, Esq.

Signature: Wendy W. Koba

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MAR 21 2001
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#3

D2487

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Declaration and Power of Attorney

As the below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled **Seamless Arbitrary Data Insertion for Streaming Media** the specification of which was filed on ***December 11, 2000,*** as application Serial No. ***09/734, 220***.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by an amendment, if any, specifically referred to in this oath or declaration.

I acknowledge the duty to disclose all information known to me which is material to patentability as defined in Title 37, Code of Federal Regulations, 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

None

I hereby claim the benefit under Title 35, United States Code, 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

None

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorney(s) with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith:

Wendy W. Koba, Esq.—Reg. No. 30509 (610)-346-7112

All written communication should be addressed to:

Wendy W. Koba, Esq.

PO Box 556

Springtown, PA 18081

I hereby appoint the attorney(s) on ATTACHMENT A as associate attorney(s) in the aforementioned application, with full power solely to prosecute said application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent and Trademark Office connected with the prosecution of said application. No other powers are granted to such associate attorney(s) and such associate attorney(s) are specifically denied any power of substitution or revocation.

Full name of 1st joint inventor: Marc W. Kauffman

Inventor's signature Marc W Kauffman Date 3/7/01

Residence: Encinitas, San Diego County, California

Citizenship: United States of America

Post Office Address: 961 Olive Crest Drive
Encinitas, California 92024

Full name of 2nd joint inventor: Jonathan Fellows

Inventor's signature Jonathan Fellows Date 17 Feb 01

Residence: Del Mar, San Diego County, California

Citizenship: United States of America

Post Office Address: 13161 Shalimar Place
Del Mar, California 92014

ATTACHMENT A

Attorney Name(s): **Wendy W. Koba** Reg. No.: 30509

Telephone calls should be made to **Wendy W. Koba** at:

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P.O. Box 556
Springtown, PA 18081-0556

OIPE JC66 3CU
MAR 12 2001
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2171
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/734,220
Filing Date	12/11/00
First Named Inventor	Kauffman
Group Art Unit	2171
Examiner Name	Not yet assigned
Attorney Docket Number	D2487

Total Number of Pages in This Submission

ENCLOSURES *(check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment / Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☒ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Assignment Papers *(for an Application)*
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) *(please identify below)*:
  ① Return receipt postcard

Remarks

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MAR 14 2001
Technology Center 2100

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Wendy W. Koba, Esq.
Signature	Wendy W. Koba
Date	3/7/01

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: 3/7/01

Typed or printed name	Wendy W. Koba, Esq.		
Signature	Wendy W. Koba	Date	3/7/01

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OIPE JC68 MAR 12 2001 PATENT & TRADEMARK OFFICE

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Patent Application

Inventor Marc Kauffman
Jonathan Fellows

Case: D2487

Serial No. **09/734,220** Group Art Unit 2171

Filing Date 12/11/00

Title: ***Seamless Arbitrary Data Insertion For Streaming Media***

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COMMISSIONER OF PATENTS
WASHINGTON, D.C. 20231

SIR:

INFORMATION DISCLOSURE STATEMENT

In accordance with 37 CFR 1.97(b), the enclosed Information Disclosure Statement, with attached reference(s), is submitted for consideration in the above-identified application.

Copies of listed documents are enclosed.

NO FEE IS REQUIRED.

Respectfully,
By: Wendy W. Koba
Wendy W. Koba, Esq.
Reg. No. 30509
Attorney for Applicant

Date: 3/7/01

Att: - Information Disclosure Statement with attachment(s)

UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/734,220	12/11/2000	Kauffman	D2487

CONFIRMATION NO. 5436

FORMALITIES LETTER

OC000000005703035

Wendy W. Koba, Esq.
PO Box 556
Springtown, PA 18081

Date Mailed: 02/05/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

- **The balance due by applicant is $ 130.**

A copy of this notice MUST be returned with the reply.

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PART 3 - OFFICE COPY

12-12 @ A

PTO/SB/05 (08-00)
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	D2487
First Inventor	Kauffman
Title	Seamless Arbitrary Data Insertion for Streaming Media"
Express Mail Label No.	EK905130775US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17) *(Submit an original and a duplicate for fee processing)*
2. ☐ Applicant claims small entity status. See 37 CFR 1.27.
3. ☒ Specification [*Total Pages* 14]
   (preferred arrangement set forth below)
   - Descriptive title of the invention
   - Cross Reference to Related Applications
   - Statement Regarding Fed sponsored R & D
   - Reference to sequence listing, a table, or a computer program listing appendix
   - Background of the Invention
   - Brief Summary of the Invention
   - Brief Description of the Drawings (*if filed*)
   - Detailed Description
   - Claim(s)
   - Abstract of the Disclosure
4. ☒ Drawing(s) *(35 U.S.C. 113)* [*Total Sheets* 2]
5. Oath or Declaration [*Total Pages* ☐]
   a. ☐ Newly executed (original or copy)
   b. ☐ Copy from a prior application (37 CFR 1.63 (d)) *(for continuation/divisional with Box 17 completed)*
      i. ☐ DELETION OF INVENTOR(S)
      Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76
7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (*Appendix*)
8. Nucleotide and/or Amino Acid Sequence Submission (*if applicable, all necessary*)
   a. ☐ Computer Readable Form (CRF)
   b. Specification Sequence Listing on.
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ paper
   c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement *(when there is an assignee)* ☐ Power of Attorney
11. ☐ English Translation Document *(if applicable)*
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. ☐ Other: . . . . . .

17. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76*

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No __ ___ __ __/___ __ __

Prior application information Examiner _____ *Group / Art Unit* ___ ___ ___ ___ ___ ___ ___

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

18. CORRESPONDENCE ADDRESS

☐ *Customer Number or Bar Code Label* *(Insert Customer No. or Attach bar code label here)* or ☐ *Correspondence address below*

Name	Wendy W. Koba, Esq.				
Address	PO Box 556				
City	Springtown	State	PA	Zip Code	18081
Country	United States of America	Telephone	610-346-7112	Fax	610-346-8189

Name (Print/Type)	Wendy W. Koba, Esq.	Registration No. (Attorney/Agent)	30509
Signature	Wendy W. Koba	Date	12/11/00

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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision

TOTAL AMOUNT OF PAYMENT ($) 890.00

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	Kauffman
Examiner Name	
Group Art Unit	
Attorney Docket No.	D 2487

METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to.
   Deposit Account Number:
   Deposit Account Name:
   ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
   ☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☒ **Payment Enclosed:**
   ☒ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	710	201	355	Utility filing fee	710.00
106	320	206	160	Design filing fee	
107	490	207	245	Plant filing fee	
108	710	208	355	Reissue filing fee	
114	150	214	75	Provisional filing fee	

SUBTOTAL (1) ($) 710.00

2. EXTRA CLAIM FEES

		Extra Claims		Fee from below	Fee Paid
Total Claims	30	-20** =	10	X 18	= 180.00
Independent Claims	2	- 3** =	0	X	= 0
Multiple Dependent					=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	80	202	40	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim, if not paid
109	80	209	40	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 180.00

**or number previously paid, if greater, For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for *ex parte* reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	390	216	195	Extension for reply within second month	
117	890	217	445	Extension for reply within third month	
118	1,390	218	695	Extension for reply within fourth month	
128	1,890	228	945	Extension for reply within fifth month	
119	310	219	155	Notice of Appeal	
120	310	220	155	Filing a brief in support of an appeal	
121	270	221	135	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,240	241	620	Petition to revive - unintentional	
142	1,240	242	620	Utility issue fee (or reissue)	
143	440	243	220	Design issue fee	
144	600	244	300	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	130	123	130	Petitions related to provisional applications	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))	
179	710	279	355	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	
Other fee (specify)					

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) ($) -0-

SUBMITTED BY					
Name (Print/Type)	Wendy W. Koba, Esq.	Registration No (Attorney/Agent)	30509	Telephone	610-346-7112
Signature	Wendy W. Koba			Date	12/11/00

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SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

Technical Field

The present invention relates to a methodology for inserting data such as advertising in streaming media and, more particularly, to a method for inserting such data at arbitrary locations along the stream.

Background of the Invention

Traditional methods of delivery of multimedia data to end users fall into two categories: 1) broadcast industry methods and 2) computer industry methods. Broadcast methods (including motion picture, cable, television network, and record industries) generally provide storage in the form of analog or digitally recorded tape. The playing of tapes causes isochronous data streams to be generated which are then moved through broadcast industry equipment to the end user. Computer methods generally provide storage in the form of disks, or disks augmented with tape, and record data in compressed digital formats such as DVI, JPEG and MPEG. On request, computers deliver non-isochronous data streams to the end user, where hardware buffers and special application code smooths the data streams to enable continuous viewing or listening.

Docket # 2487

"Streaming media" is now considered to be a term of art and defines the capability to download multimedia files in real time (or "near real" time) and play the file on an end-user device, such as through a set-top box on a television or on a computer display device.

In the current state of the technology, it is possible to also download advertisements (or other media) to end users once the video or other presented material in the stream is completed. The need to "wait" until the end of the program thus limits the number, as well as the duration of advertisements that can be presented to end users.

Thus, a need remains in the art for an arrangement capable of inserting other video sources into a streaming media download.

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Summary of the Invention

The need remaining in the art is addressed by the present invention, which relates to a methodology for inserting data such as advertising in streaming media and, more particularly, to a method for inserting such data at arbitrary locations along the stream.

In accordance with the present invention, a "caching inserter" system is disposed at a local point of presence (POP) which intercepts a video stream destined for an end user. When insertion of advertising (or other information – such as a "news" bulletin weather information, for example) is desired, the video stream is stored/buffered at the local POP and the advertisement is played. When the ad is completed, the first stream is then played out of the buffer. Once the video has begun to enter and fill the buffer (that is, once an ad is inserted in the stream), the buffer must remain in the signal path for the duration of the video stream.

In an alternative embodiment of the present invention, the ad may first be loaded into a buffer at the POP and once the ad has begun, the concatenation point of the video stream can be appended to the end of the advertisement file. In this case, the length of the advertisement need not be monitored and no further action is required, since the video stream will simply re-commence when the ad is finished.

The POP where the advertisement cache is located could be at any convenient place along the signal path between the information source(s) and the end-user. For example, the advertisement cache could be at the headend, or at a FTTH node in a neighborhood. At the extreme, the advertisement cache could be part of a set-top box at the end-user location. Obviously, the location of the advertisement cache then affects the number of separate end users that can receive the same advertisement. Particularly, the further upstream the advertisement cache is located, the greater the broadcast potential of a particular ad. Advantageously, however, judicious location and control of various advertisement contents can be incorporated into the present invention such that content can be targeted to particular end users.

It is an advantage of a particular arrangement of the present invention that the requirement of passing an advertisement stream through a cache allows for various statistics to be collected at the POP, such as the number of times a particular ad is played, the number of end users that viewed the ad, the time of day and day of week the ad was

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played, etc. Such information can then be collected by a billing system and used to derive price information for use with the advertisement suppliers.

Various other features and advantages of the present invention will become apparent during the course of the following discussion and by reference to the accompanying drawings.

Brief Description of the Drawings

Referring now to the drawings,

FIG. 1 is a system-level block diagram illustrating the capability of inserting advertisement into streaming multimedia in accordance with the present invention;

FIG. 2 contains two separate diagrams of media stream, one including advertisement as a prefix and the other including advertisement embedded within the multimedia stream; and

FIG. 3 illustrates an exemplary cache/inserter arrangement that may be utilized to implement the arrangement of the present invention.

Detailed Description

An exemplary architecture for supporting the insertion of an alternative message into streaming multimedia in accordance with the present invention is illustrated in FIG. 1. For the purposes of discussion, the "alternative message" will be referred to as an "advertisement" and, in one embodiment, may be advertisements that are targeted to the interests of the specific subscriber/end-user (hereinafter referred to simply as an "end-user"), where the phrase "end-user" is considered to include both a single end-user and a group of end-users (as in the case of a "multicast"/"broadcast"). However, it is to be understood that various other types of messages may also be inserted into a streaming multimedia download. For example, news or weather emergency messages may be inserted, if warranted, into an on-going multimedia stream.

Referring to FIG. 1, an end-user 10 is depicted as a residential end-user that is capable of receiving multimedia information through either a television 12 (using a set-top box 14 or other appropriate residential gateway device) or a computer terminal 16 (including appropriate software to convert the received files and play them on the display

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of computer 16). In a preferred architecture, a coaxial cable connection 18 is used to provide communication between end-user 10 and a head-end, or local distribution network 20 (alternatively, connection 18 may comprise a DSL connection or a wireless connection). Although not depicted in the diagram of FIG. 1, local distribution network 20 is similarly connected to a multiplicity of end-users and, in fact, may be connected to these users in a tree-and-branch architecture. For conventional communications, local distribution network 20 is connected through one or more links 22 (in most cases, optical fiber links) to a data network 24 (which may be referred to as the Internet). Multiple sources of information, resident on servers, are connected through their own links to data network 24, and other sources are likewise interconnected and are able to communicate with each other using data network 24. For the purposes of the present discussion, one such multimedia server 26 and a communication link 28 are shown in FIG. 1 as connected to data network 24, where the content stored on multimedia server 26 is thus accessible by end-user 10. In a conventional use of this arrangement, end-user 10 would send a request through local distribution network 20 and into data network 24 for one or more multimedia files to be downloaded and "played" on one of his devices (for example, television 12 or computer 16). A link would be established between end-user 10 and the appropriate multimedia server 26 holding the file requested by the end-user. With the link established, the requested file is "streamed" down the communication links to end-user 10 in a continuous fashion, allowing for uninterrupted viewing (of, for example, a movie, music video, or the like) of the multimedia content of the file.

In accordance with the present invention, additional components have been implemented in the communication path to allow for advertisements (or other messages, as mentioned above) to be inserted in streaming multimedia in a seamless fashion, that is, without the need to "wait" for predetermined time slots or breaks in the multimedia stream. Referring to FIG. 1, a "caching inserter" 30, located in a local point-of-presence (POP) 32 along the path between data network 24 and local distribution network 20 functions to monitor incoming streaming multimedia along link 34 and insert, as discussed in detail below, an advertisement, at a location along the stream. The advertisement medium itself may be resident on a separate advertisement content server 36 coupled by a separate data link 38 to data network 24. A "rule" server 40 is shown in

Docket: D/2487

FIG. 1 and may be used to direct particularly advertising content to specific end-users, where rule server 40 interacts with caching insert 30, as shown in FIG. 1. In order to control payment for the advertisement insertion service, a separate billing system 42 may also be associated with caching inserter 30.

In operation, a specific end-user first requests a particular multimedia file to be accessed and streamed into one of his devices. Referring to FIG. 1, such a request first passes through caching inserter 30 and then enters data network 24, which seeks out a specific server 26 holding the desired multimedia file. In order to identify a flow that contains streaming multimedia content, caching server 26 may detect a request or, through examination of the content of the flow, detect the download of a multimedia file. Once caching inserter 30 receives the initial request, the identity of end-user 10 may be forwarded to rule server 40 that can then access its internal database to determine the type of advertisement (or other information) that would most likely be of interest to that user. For example, end-user 10 may be interested in antique cars and that information would be stored in "rule" server 40, along with the IP address(es) of servers holding advertisement information related to antique cars. Rule server 40 then sends the IP address information back to caching inserter 30 which then accesses data network 34 to retrieve a particular advertisement multimedia file (from, for example, advertising content server 36). The retrieved advertisement file is then forwarded to and cached at caching inserter 30.

In accordance with the present invention, once caching inserter 30 has an advertisement file available (either stored, or available as a stream from the advertisement server), the incoming (requested) multimedia file destined for end-user 10 can be cached, and the advertisement multimedia file streamed in its place to end-user 10 in a seamless manner. The multimedia file itself is not stopped at any point, but is continuously cached by caching inserter 30 as it is received from streaming media server 26. At the end of the advertisement file, the stored multimedia stream is played out and, for the duration of the stream, will continue to pass through a cache, since there will continue to be a time delay between the incoming stream to caching inserter 30 and the outgoing stream to end-user 10 (the "delay" being the length of the inserted advertisement). Since the end time of the advertisement is known by caching inserter 30, the streaming multimedia file can merely be appended to the end of the advertisement,

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allowing the playing of the requested file to recommence in a seamless manner without further action required by caching inserter 30.

As shown in FIG. 1, a billing system 42 may be included in the arrangement and configured to receive input information from caching inserter 30. That is, billing system 42 may be used to collect information regarding the identity of the various advertisement files that are requested and the number of times each file is requested. Other information, such as the time of day of the request, day of the week, etc., may also be collected. This information is useful both for the supplier of the advertisements and for billing the advertisement for the supplied service (e.g., the identity of the end-user(s) viewing the advertisement, the number of times a particular ad is requested in a day/week, etc.).

Although only one such end-user is shown in FIG. 1, it is to be understood that caching inserter 30 of the present invention is to be used with multiple users, where rule server 40 includes in a database information of a plurality of known end-users and is capable of requesting various types of files that are pertinent to different end-users. Moreover, caching inserter 30 itself is capable of caching any desired number of separate advertisements and controlling the insertion of the advertisements in the proper streaming multimedia files, while at the same time caching and then controlling the sending out of the cached multimedia files to the appropriate end-users.

In one embodiment of the present invention, the multimedia stream will begin to reach the end-user before an advertisement is inserted, as represented by diagram A in FIG. 2. In this case, an initial header slot 50 is understood by the receiving device (set-top box or computer) as the requested multimedia file. The receiving device is then properly configured to play the streaming multimedia file, which follows as segment 52 of diagram A. At some point along the playing of the file, an advertisement is inserted as segment 54 and the remainder of the multimedia stream, represented as segment 56, is appended to the end of the advertisement, as discussed above. In one example, a timing signal in the multimedia file may be used as a "trigger" to initiate the insertion of the adveristment into the stream. Alternatively, the advertisement may simply be cached and held until the end of the multimedia stream, as shown in diagram B of FIG. 2, or played as the initial segment (between the header and the streaming multimedia), as shown in diagram C. In any alternative, additional bytes may be added to the beginning and end of

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the advertisement file to create a "fade in" and "fade out" between the advertisement and requested multimedia stream, where such fading is considered to be more acceptable by the end-user than a sharp break between the independent streams.

FIG. 3 illustrates an exemplary caching inserter 30 that may be used in the system of the present invention as described above in association with FIG. 1. Included within caching inserter 30 is a first cache 60 used to store an incoming specific advertisement file, designated as stream A, from advertisement content server 60. A second cache 62 is used to store the incoming multimedia stream, designated as stream MM, where as discussed above, cache 62 is used to store incoming stream MM once advertisement stream A has begun to be "played out" toward end-user 10. An analyzer 64 is included in the communication path between the network (which may be data network 24, local distribution network 20, or any other communication network, since caching inserter 30 may be disposed at any appropriate location along the path between the various multimedia servers and end-users) and end-user 10. Analyzer 64 will detect when a multimedia stream has been received, determine the associated protocol and rate, and transmit this information to a timing and control unit 66. Other control inputs to timing and control unit 66 are from advertising content (first) cache 60 and multimedia content (second) cache 62, where control unit 66 uses the input from these caches to determine the proper stream to be played out to end-user 10. For example, unless and until a full advertisement file is loaded in first cache 60, multimedia stream MM can be played coupled in real time to end-user 10, indicated as position (1) of switch 67 of inserter 30. When control unit 66 receives a particular indication from first cache 60 (such as "EOF" received), it knows that advertisement stream A is ready to be played out and multimedia stream MM can be held. A signal is then sent from timing and control unit 66 to switch 67, requesting the switch to move to position (2), allowing the cached advertisement stream A to be sent to end-user 10. Once this process begins, multimedia stream MM will begin to be stored in second cache 62. When timing and control unit 66 receives a command that the end of the advertisement has been reached, a signal to move switch 67 to position (3) will be sent, allowing the cached multimedia stream to be sent to end-user 10. If the advertisement is inserted at the beginning of or during the multimedia stream, the received multimedia stream will need to be stored in, then played out of, second

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cache 62 for the duration of the multimedia file. A rate and/or format transcoder 68 may also be included in the signal path between first cache 60 and end-user 10 to insure that the advertisement is transmitted at the same data rate and format as the requested multimedia file, where this information has previously been retrieved by analyzer 64, or by some other means.

While the arrangement as described above illustrates the various servers as being in geographically disparate locations, it is to be understood that one or more may be co-located. Additionally, as noted above, the caching inserter of the present invention may be disposed at any location between the various content servers and the end-user. Indeed, various other modifications to the arrangement as described above will occur to those skilled in the art and are considered to fall within the spirit and scope of the present invention as defined by the claims appended hereto.

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What is claimed is:

1. An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete file being stored in said first cache; and

a switching mechanism, responsive to said control unit switching output signal, said first cache and said second cache for providing as an output, directed to the at least one end-user, a stream selected one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit.

2. The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit.

3. The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that an alternative file is available to be streamed to said first cache from an external server and is ready to begin transmission to the predetermined at least one end-user.

4. The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.

5. The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the cached alternative file stored in said first cache in response to a signal from the control unit that an alternative file is ready to transmit.

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6. The arrangement as defined in claim 1 wherein the control signal input to said control unit indicates that the alternative media file transfer to the predetermined at least one end-user is completed, the control unit thereafter supplying a switching output signal to said switching mechanism request said switching mechanism to supply as the output the cached streaming multimedia file.

7. The arrangement as defined in claim 1 wherein the arrangement further comprises

a billing system coupled to the control unit for receiving information from said control unit regarding the identity of each alternative media file transmitted, the identity of the at least one end-user, and related statistics regarding the transmission of various alternative media files to a plurality of different end-users.

8. The arrangement as defined in claim 7 wherein the related statistics include the number of times each alternative media file is requested during a predetermined period of time.

9. The arrangement as defined in claim 7 wherein the related statistics includes the time of day and date that each alternative media file is requested.

10. The arrangement as defined in claim 1 wherein the alternative file is defined as an advertisement file.

11. The arrangement as defined in claim 1 wherein the alternative file is defined as an emergency information file.

12. The arrangement as defined in claim 1 wherein the arrangement is disposed at a local point of presence in a communication network.

13. The arrangement as defined in claim 12 wherein the arrangement is disposed at a headend location in an HFC communication network.

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14. The arrangement as defined in claim 12 wherein the arrangement is disposed between a wide area data network and a local distribution network.

15. The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and a DSL communication network.

16. The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and wireless communication network.

17. The arrangement as defined in claim 12 wherein the arrangement is disposed in a communications device at an end-user location.

18. The arrangement as defined in claim 17 wherein the communications device comprises a set-top box.

19. The arrangement as defined in claim 17 wherein the communications device comprises a residential gateway device.

20. The arrangement as defined in claim 1 wherein the arrangement further comprises a rule server for retrieving information related to the predetermined at least one end-user and selecting the alternative media file based on said retrieved information and the specific content of the streaming multimedia file.

21. A method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user, the method comprising the steps of:

a) storing a selected alternative multimedia file in a first cache at a local point of presence;

b) establishing a communication link between said streaming multimedia file and said predetermined end-user;

c) transmitting said streaming multimedia file to said end-user;

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d) switching transmission from said streaming multimedia file to said alternative media file stored in said first cache;

e) storing in a second cache said streaming multimedia file received during the transmission of said alternative media file; and

f) upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file.

22. The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) receiving a request from a predetermined end-user for a streaming multimedia file;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

23. The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) detecting the start of a streaming multimedia flow;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

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24. The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.

25. The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the beginning of said multimedia file.

26. The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the end of said multimedia file.

27. The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at any location during transmission of said multimedia file.

28. The method as defined in claim 21 wherein in performing step d), providing transition segments between the streaming multimedia file and the alternative file.

29. The method as defined in claim 28 wherein the transition segments provide "fade in" and "fade out" between said files.

30. The method as defined in claim 21 wherein in performing step d), switching from said streamlining multimedia file to said alternative file based on a timing signal embedded in said streaming multimedia file.

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Abstract of the Disclosure

An arrangement for inserting advertisement media into a streaming multimedia file destined for an end-user uses a caching inserter including a first cache for storing a loaded advertisement file and a second cache for holding the streaming multimedia file that needs to be buffered as the advertisement file is sent to the end-user. The advertisement file may be inserted at the beginning of the multimedia file, the end, or at any point during the stream. Once the advertisement begins to be sent to the end-user, the incoming multimedia stream is cached and then is played out of the cache once the advertisement has ended. As a result of the time delay associated with the advertisement, the remainder of the multimedia file must be cached then played out until the stream is complete.

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Ex. 1023

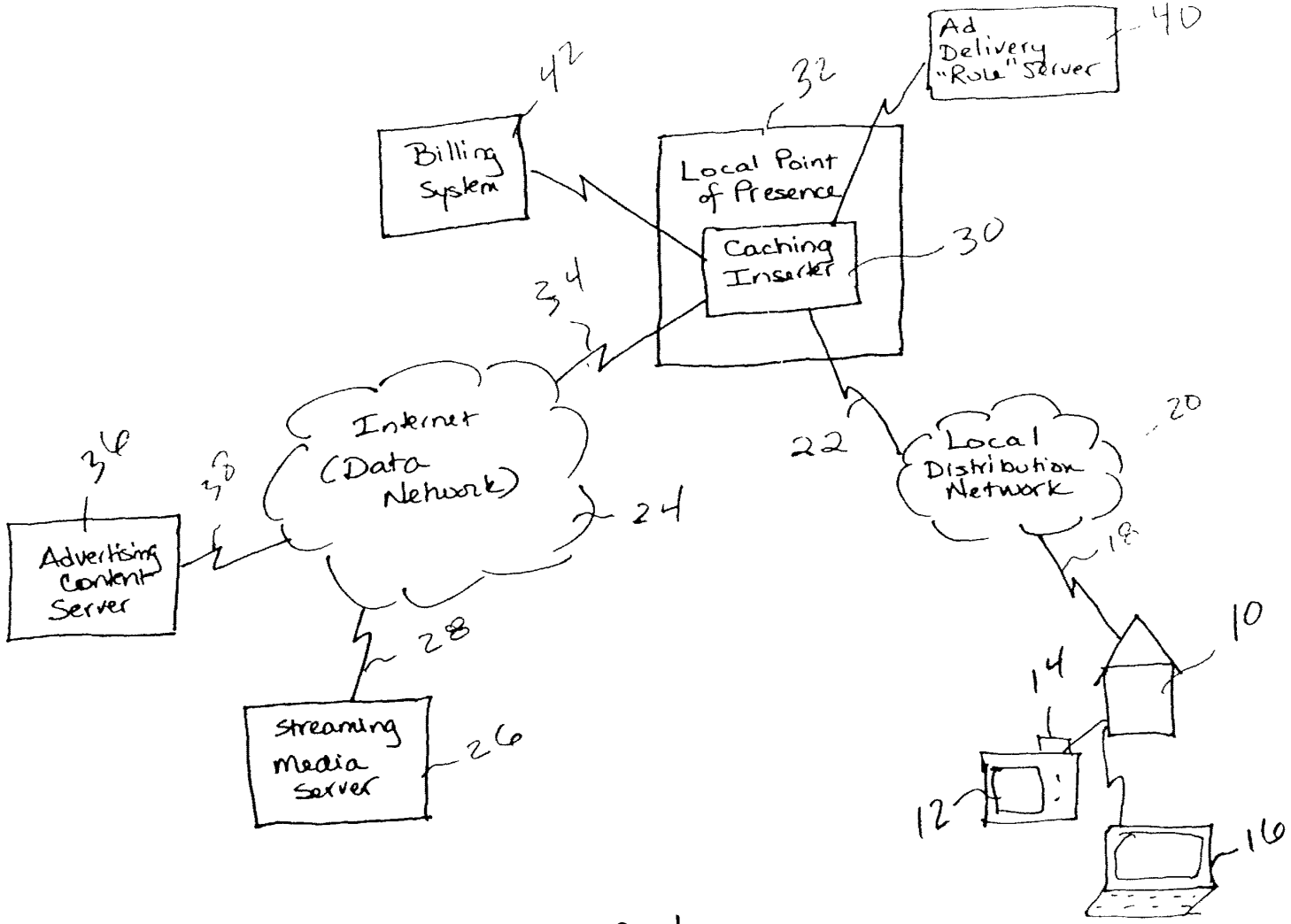


FIG 1

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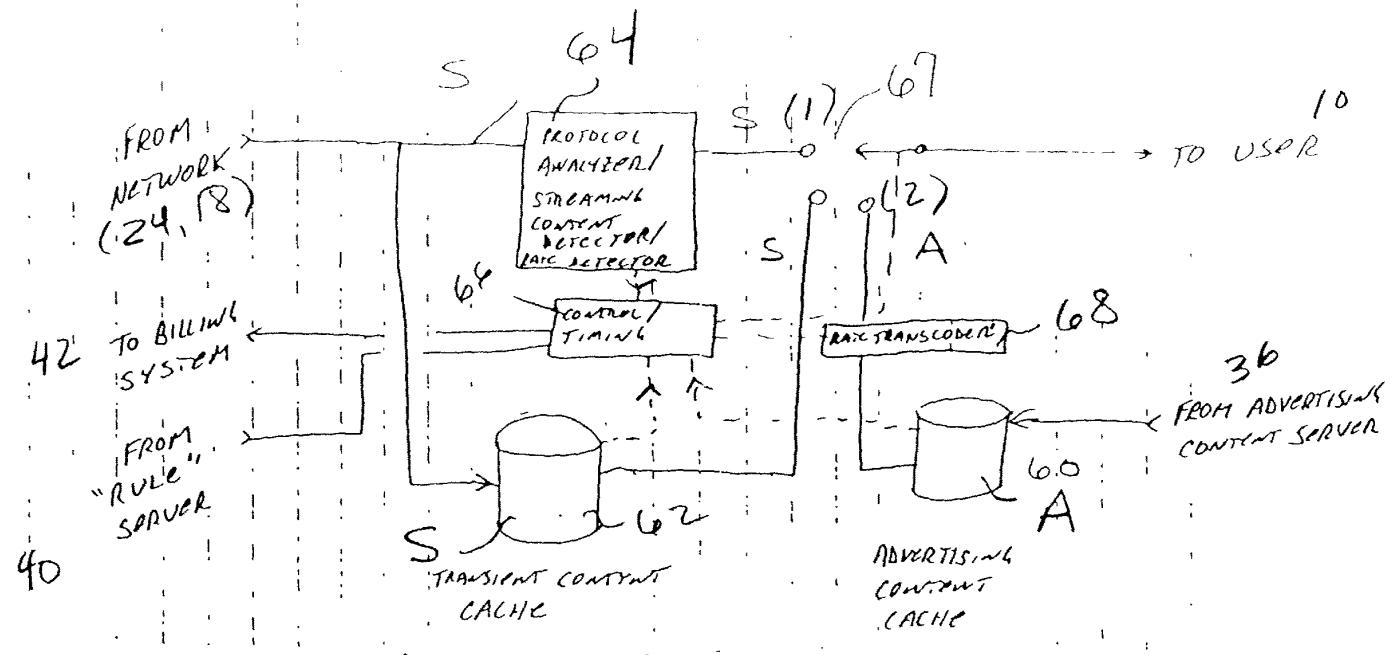


FIG. 3

30 STREAMING CACHE/INSERTER SYSTEM

(SYSTEM HANDLES MULTIPLE THREADS SIMULTANEOUSLY)
(SCALES TO ACCOMMODATE ANTICIPATED TRAFFIC LOAD)

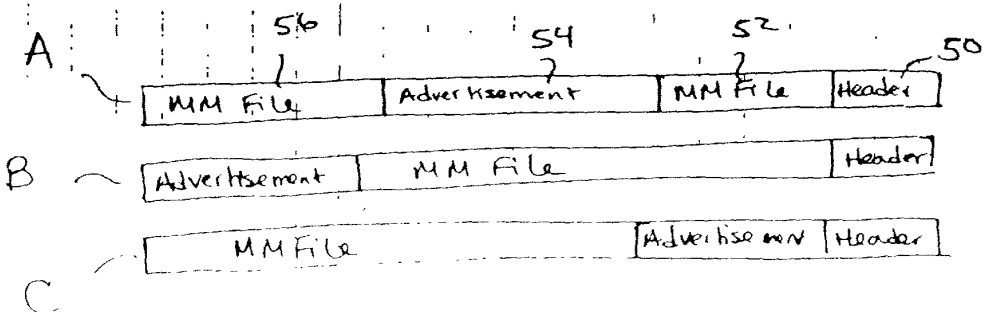


FIG. 2

JC617

JC53

Class	Subclass	ISSUE CLASSIFICATION

PATENT NUMBER

U.S. **UTILITY** Patent Application

O.I.P.E.	PATENT DATE
SCANNED AK NS ③ Q.A. AA	

APPLICATION NO.	CONT/PRIOR	CLASS	SUBCLASS	ART UNIT	EXAMINER
09/734220		709	231	2143	Duong

APPLICANTS: Marc Kauffman
Jonathan Fellows

TITLE: Seamless arbitrary data insertion for streaming media

PTO-2040
12/99

ISSUING CLASSIFICATION

ORIGINAL		CROSS REFERENCE(S)	
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)
INTERNATIONAL CLASSIFICATION			
			☐ Continued on Issue Slip Inside File Jacket

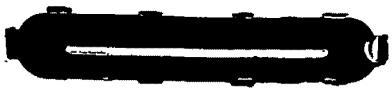
☐ TERMINAL DISCLAIMER	DRAWINGS			CLAIMS ALLOWED	
	Sheets Drwg.	Figs. Drwg.	Print Fig.	Total Claims	Print Claim for O.G.
☐ The term of this patent subsequent to _____ (date) has been disclaimed.	_____ (Assistant Examiner) _____ (Date)			NOTICE OF ALLOWANCE MAILED	
☐ The term of this patent shall not extend beyond the expiration date of U.S Patent. No. _____	_____ (Primary Examiner) _____ (Date)			ISSUE FEE	
				Amount Due	Date Paid
☐ The terminal ____months of this patent have been disclaimed.	_____ (Legal Instruments Examiner) _____ (Date)			ISSUE BATCH NUMBER	

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SEARCHED

Class	Sub.	Date	Exmr.
709	231	5/16/04	TD

INTERFERENCE SEARCHED

Class	Sub.	Date	Exmr.

SEARCH NOTES
(INCLUDING SEARCH STRATEGY)

	Date	Exmr.
Please see search history	5/16/04	TD

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ISSUE SLIP STAPLE AREA (for additional cross references)

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FEE DETERMINATION			
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FORMALITY REVIEW	[illegible]	JC827	01-24-01
RESPONSE FORMALITY REVIEW	MD	JC911	02/20/01

INDEX OF CLAIMS

✔ ..... Rejected
= ..... Allowed
— (Through numeral)... Canceled
÷ ..... Restricted
N ..... Non-elected
I ..... Interference
A ..... Appeal
O ..... Objected

Claim Final	Claim Original	Date 5/17/04
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	D2487
First Inventor	Kauffman
Title	Seamless Arbitrary Data Insertion for Streaming Media
Express Mail Label No.	EK906130775US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231

1. [X] Fee Transmittal Form (e.g., PTO/SB/17) *(Submit an original and a duplicate for fee processing)*
2. [ ] Applicant claims small entity status. See 37 CFR 1.27.
3. [X] Specification [Total Pages 14] *(preferred arrangement set forth below)*
   - Descriptive title of the invention
   - Cross Reference to Related Applications
   - Statement Regarding Fed sponsored R & D
   - Reference to sequence listing, a table, or a computer program listing appendix
   - Background of the Invention
   - Brief Summary of the Invention
   - Brief Description of the Drawings *(if filed)*
   - Detailed Description
   - Claim(s)
   - Abstract of the Disclosure
4. [X] Drawing(s) *(35 U.S.C. 113)* [Total Sheets 2]
5. Oath or Declaration [Total Pages]
   a. [ ] Newly executed (original or copy)
   b. [ ] Copy from a prior application (37 CFR 1.63 (d)) *(for continuation/divisional with Box 17 completed)*
      i. [ ] DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. [ ] Application Data Sheet. See 37 CFR 1.76
7. [ ] CD-ROM or CD-R in duplicate, large table or Computer Program *(Appendix)*
8. Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
   a. [ ] Computer Readable Form (CRF)
   b. Specification Sequence Listing on:
      i. [ ] CD-ROM or CD-R (2 copies); or
      ii. [ ] paper
   c. [ ] Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. [ ] Assignment Papers (cover sheet & document(s))
10. [ ] 37 CFR 3.73(b) Statement *(when there is an assignee)* [ ] Power of Attorney
11. [ ] English Translation Document *(if applicable)*
12. [ ] Information Disclosure Statement (IDS)/PTO-1449 [ ] Copies of IDS Citations
13. [ ] Preliminary Amendment
14. [X] Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
15. [ ] Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. [ ] Other: .....

17. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:*

[ ] Continuation [ ] Divisional [ ] Continuation-in-part (CIP) of prior application No.: _____ / _____

Prior application information: Examiner _____ Group / Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

18. CORRESPONDENCE ADDRESS

[ ] Customer Number or Bar Code Label (Insert Customer No. or Attach bar code label here) or [ ] Correspondence address below

Name	Wendy W. Koba, Esq.				
Address	PO Box 556				
City	Springtown	State	PA	Zip Code	18081
Country	United States of America	Telephone	610-346-7112	Fax	610-346-8189

Name (Print/Type)	Wendy W. Koba, Esq.	Registration No. (Attorney/Agent)	30509
Signature	Wendy W. Koba	Date	12/11/00

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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT ($) 890.00

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	Kauffman
Examiner Name	
Group Art Unit	
Attorney Docket No.	D 2487

METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:
   Deposit Account Number
   Deposit Account Name
   ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
   ☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☒ **Payment Enclosed:**
   ☒ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	710	201	355	Utility filing fee	710.00
106	320	206	160	Design filing fee	
107	490	207	245	Plant filing fee	
108	710	208	355	Reissue filing fee	
114	150	214	75	Provisional filing fee	

SUBTOTAL (1) ($) 710.00

2. EXTRA CLAIM FEES

		Extra Claims		Fee from below	Fee Paid
Total Claims	30	-20** =	10	X 18	= 180.00
Independent Claims	2	- 3** =	0	X	= 0
Multiple Dependent					=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	80	202	40	Independent claims in excess of 3
104	270	204	135	Multiple dependent claim, if not paid
109	80	209	40	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 180.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for *ex parte* reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	390	216	195	Extension for reply within second month	
117	890	217	445	Extension for reply within third month	
118	1,390	218	695	Extension for reply within fourth month	
128	1,890	228	945	Extension for reply within fifth month	
119	310	219	155	Notice of Appeal	
120	310	220	155	Filing a brief in support of an appeal	
121	270	221	135	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,240	241	620	Petition to revive - unintentional	
142	1,240	242	620	Utility issue fee (or reissue)	
143	440	243	220	Design issue fee	
144	600	244	300	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	130	123	130	Petitions related to provisional applications	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))	
179	710	279	355	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	
Other fee (specify) _____					

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) ($) -0-

SUBMITTED BY				Complete (if applicable)	
Name (Print/Type)	Wendy W. Koba Esq.	Registration No. (Attorney/Agent)	30509	Telephone	610-346-7112
Signature	Wendy W. Koba			Date	12/11/00

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jc853 U.S. PTO
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EXPRESS MAIL

CERTIFICATE OF MAILING

Patent Application for:

Applicants: Marc Kauffman
Jonathon Yellows

Atty. No: D 2487

Title: Seamless Arbitrary Data Insertion for Streaming Media

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Type or Print name of person signing this certificate: Wendy W. Koba, Esq.

Signature: Wendy W. Koba

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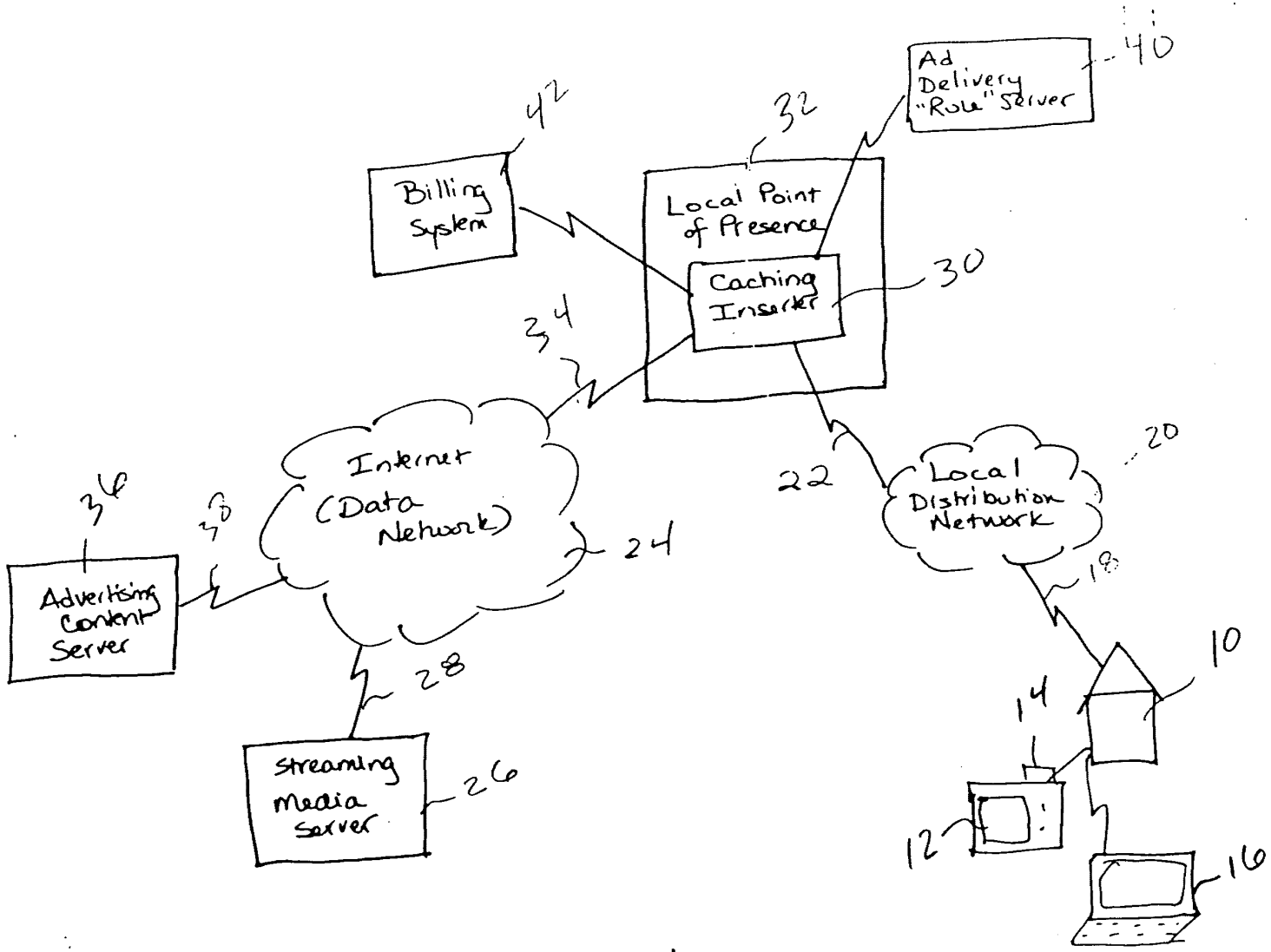


FIG 1

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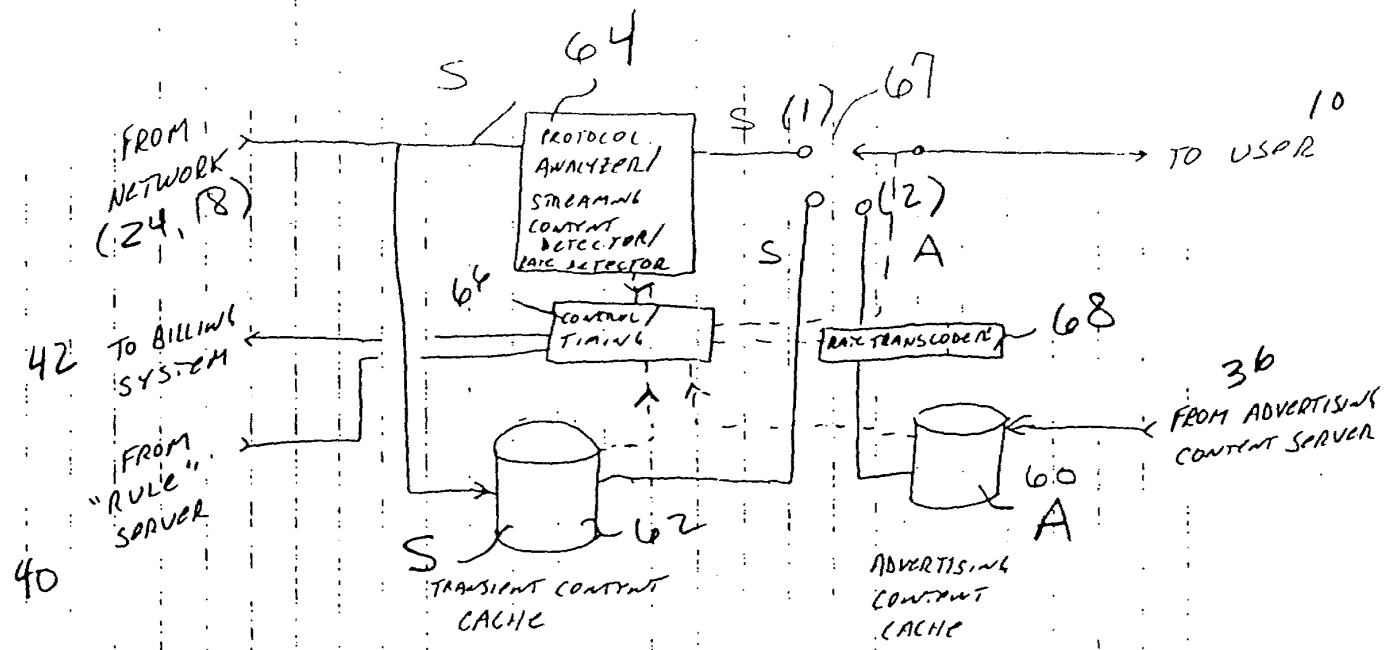


FIG. 3

30 STREAMING CACHE/INSERTER SYSTEM

(SYSTEM HANDLES MULTIPLE THREADS SIMULTANEOUSLY)
(SCALES TO ACCOMMODATE ANTICIPATED TRAFFIC LOAD)

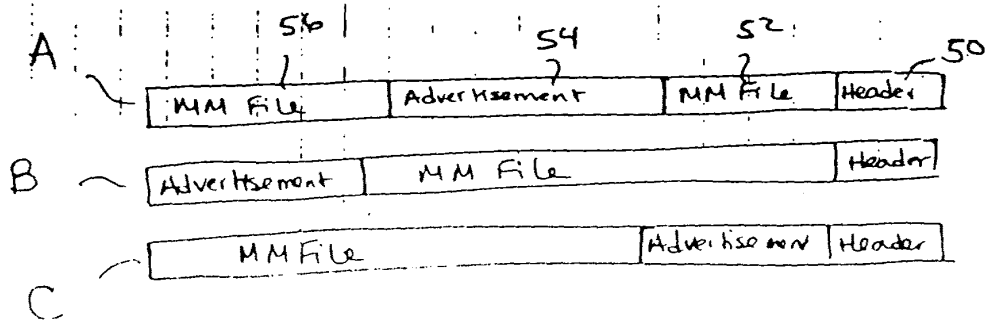


FIG. 2

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SEAMLESS ARBITRARY DATA INSERTION FOR STREAMING MEDIA

Technical Field

The present invention relates to a methodology for inserting data such as advertising in streaming media and, more particularly, to a method for inserting such data at arbitrary locations along the stream.

Background of the Invention

Traditional methods of delivery of multimedia data to end users fall into two categories: 1) broadcast industry methods and 2) computer industry methods. Broadcast methods (including motion picture, cable, television network, and record industries) generally provide storage in the form of analog or digitally recorded tape. The playing of tapes causes isochronous data streams to be generated which are then moved through broadcast industry equipment to the end user. Computer methods generally provide storage in the form of disks, or disks augmented with tape, and record data in compressed digital formats such as DVI, JPEG and MPEG. On request, computers deliver non-isochronous data streams to the end user, where hardware buffers and special application code smooths the data streams to enable continuous viewing or listening.

"Streaming media" is now considered to be a term of art and defines the capability to download multimedia files in real time (or "near real" time) and play the file on an end-user device, such as through a set-top box on a television or on a computer display device.

In the current state of the technology, it is possible to also download advertisements (or other media) to end users once the video or other presented material in the stream is completed. The need to "wait" until the end of the program thus limits the number, as well as the duration of advertisements that can be presented to end users.

Thus, a need remains in the art for an arrangement capable of inserting other video sources into a streaming media download.

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Summary of the Invention

The need remaining in the art is addressed by the present invention, which relates to a methodology for inserting data such as advertising in streaming media and, more particularly, to a method for inserting such data at arbitrary locations along the stream.

In accordance with the present invention, a "caching inserter" system is disposed at a local point of presence (POP) which intercepts a video stream destined for an end user. When insertion of advertising (or other information – such as a "news" bulletin weather information, for example) is desired, the video stream is stored/buffered at the local POP and the advertisement is played. When the ad is completed, the first stream is then played out of the buffer. Once the video has begun to enter and fill the buffer (that is, once an ad is inserted in the stream), the buffer must remain in the signal path for the duration of the video stream.

In an alternative embodiment of the present invention, the ad may first be loaded into a buffer at the POP and once the ad has begun, the concatenation point of the video stream can be appended to the end of the advertisement file. In this case, the length of the advertisement need not be monitored and no further action is required, since the video stream will simply re-commence when the ad is finished.

The POP where the advertisement cache is located could be at any convenient place along the signal path between the information source(s) and the end-user. For example, the advertisement cache could be at the headend, or at a FTTH node in a neighborhood. At the extreme, the advertisement cache could be part of a set-top box at the end-user location. Obviously, the location of the advertisement cache then affects the number of separate end users that can receive the same advertisement. Particularly, the further upstream the advertisement cache is located, the greater the broadcast potential of a particular ad. Advantageously, however, judicious location and control of various advertisement contents can be incorporated into the present invention such that content can be targeted to particular end users.

It is an advantage of a particular arrangement of the present invention that the requirement of passing an advertisement stream through a cache allows for various statistics to be collected at the POP, such as the number of times a particular ad is played, the number of end users that viewed the ad, the time of day and day of week the ad was

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played, etc. Such information can then be collected by a billing system and used to derive price information for use with the advertisement suppliers.

Various other features and advantages of the present invention will become apparent during the course of the following discussion and by reference to the accompanying drawings.

Brief Description of the Drawings

Referring now to the drawings,

FIG. 1 is a system-level block diagram illustrating the capability of inserting advertisement into streaming multimedia in accordance with the present invention;

FIG. 2 contains two separate diagrams of media stream, one including advertisement as a prefix and the other including advertisement embedded within the multimedia stream; and

FIG. 3 illustrates an exemplary cache/inserter arrangement that may be utilized to implement the arrangement of the present invention.

Detailed Description

An exemplary architecture for supporting the insertion of an alternative message into streaming multimedia in accordance with the present invention is illustrated in FIG. 1. For the purposes of discussion, the "alternative message" will be referred to as an "advertisement" and, in one embodiment, may be advertisements that are targeted to the interests of the specific subscriber/end-user (hereinafter referred to simply as an "end-user"), where the phrase "end-user" is considered to include both a single end-user and a group of end-users (as in the case of a "multicast"/"broadcast"). However, it is to be understood that various other types of messages may also be inserted into a streaming multimedia download. For example, news or weather emergency messages may be inserted, if warranted, into an on-going multimedia stream.

Referring to FIG. 1, an end-user 10 is depicted as a residential end-user that is capable of receiving multimedia information through either a television 12 (using a set-top box 14 or other appropriate residential gateway device) or a computer terminal 16 (including appropriate software to convert the received files and play them on the display

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of computer 16). In a preferred architecture, a coaxial cable connection 18 is used to provide communication between end-user 10 and a head-end, or local distribution network 20 (alternatively, connection 18 may comprise a DSL connection or a wireless connection). Although not depicted in the diagram of FIG. 1, local distribution network 20 is similarly connected to a multiplicity of end-users and, in fact, may be connected to these users in a tree-and-branch architecture. For conventional communications, local distribution network 20 is connected through one or more links 22 (in most cases, optical fiber links) to a data network 24 (which may be referred to as the Internet). Multiple sources of information, resident on servers, are connected through their own links to data network 24, and other sources are likewise interconnected and are able to communicate with each other using data network 24. For the purposes of the present discussion, one such multimedia server 26 and a communication link 28 are shown in FIG. 1 as connected to data network 24, where the content stored on multimedia server 26 is thus accessible by end-user 10. In a conventional use of this arrangement, end-user 10 would send a request through local distribution network 20 and into data network 24 for one or more multimedia files to be downloaded and "played" on one of his devices (for example, television 12 or computer 16). A link would be established between end-user 10 and the appropriate multimedia server 26 holding the file requested by the end-user. With the link established, the requested file is "streamed" down the communication links to end-user 10 in a continuous fashion, allowing for uninterrupted viewing (of, for example, a movie, music video, or the like) of the multimedia content of the file.

In accordance with the present invention, additional components have been implemented in the communication path to allow for advertisements (or other messages, as mentioned above) to be inserted in streaming multimedia in a seamless fashion, that is, without the need to "wait" for predetermined time slots or breaks in the multimedia stream. Referring to FIG. 1, a "caching inserter" 30, located in a local point-of-presence (POP) 32 along the path between data network 24 and local distribution network 20 functions to monitor incoming streaming multimedia along link 34 and insert, as discussed in detail below, an advertisement, at a location along the stream. The advertisement medium itself may be resident on a separate advertisement content server 36 coupled by a separate data link 38 to data network 24. A "rule" server 40 is shown in

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FIG. 1 and may be used to direct particularly advertising content to specific end-users, where rule server 40 interacts with caching insert 30, as shown in FIG. 1. In order to control payment for the advertisement insertion service, a separate billing system 42 may also be associated with caching inserter 30.

In operation, a specific end-user first requests a particular multimedia file to be accessed and streamed into one of his devices. Referring to FIG. 1, such a request first passes through caching inserter 30 and then enters data network 24, which seeks out a specific server 26 holding the desired multimedia file. In order to identify a flow that contains streaming multimedia content, caching server 26 may detect a request or, through examination of the content of the flow, detect the download of a multimedia file. Once caching inserter 30 receives the initial request, the identity of end-user 10 may be forwarded to rule server 40 that can then access its internal database to determine the type of advertisement (or other information) that would most likely be of interest to that user. For example, end-user 10 may be interested in antique cars and that information would be stored in "rule" server 40, along with the IP address(es) of servers holding advertisement information related to antique cars. Rule server 40 then sends the IP address information back to caching inserter 30 which then accesses data network 34 to retrieve a particular advertisement multimedia file (from, for example, advertising content server 36). The retrieved advertisement file is then forwarded to and cached at caching inserter 30.

In accordance with the present invention, once caching inserter 30 has an advertisement file available (either stored, or available as a stream from the advertisement server), the incoming (requested) multimedia file destined for end-user 10 can be cached, and the advertisement multimedia file streamed in its place to end-user 10 in a seamless manner. The multimedia file itself is not stopped at any point, but is continuously cached by caching inserter 30 as it is received from streaming media server 26. At the end of the advertisement file, the stored multimedia stream is played out and, for the duration of the stream, will continue to pass through a cache, since there will continue to be a time delay between the incoming stream to caching inserter 30 and the outgoing stream to end-user 10 (the "delay" being the length of the inserted advertisement). Since the end time of the advertisement is known by caching inserter 30, the streaming multimedia file can merely be appended to the end of the advertisement,

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allowing the playing of the requested file to recommence in a seamless manner without further action required by caching inserter 30.

As shown in FIG. 1, a billing system 42 may be included in the arrangement and configured to receive input information from caching inserter 30. That is, billing system 42 may be used to collect information regarding the identity of the various advertisement files that are requested and the number of times each file is requested. Other information, such as the time of day of the request, day of the week, etc., may also be collected. This information is useful both for the supplier of the advertisements and for billing the advertisement for the supplied service (e.g., the identity of the end-user(s) viewing the advertisement, the number of times a particular ad is requested in a day/week, etc.).

Although only one such end-user is shown in FIG. 1, it is to be understood that caching inserter 30 of the present invention is to be used with multiple users, where rule server 40 includes in a database information of a plurality of known end-users and is capable of requesting various types of files that are pertinent to different end-users. Moreover, caching inserter 30 itself is capable of caching any desired number of separate advertisements and controlling the insertion of the advertisements in the proper streaming multimedia files, while at the same time caching and then controlling the sending out of the cached multimedia files to the appropriate end-users.

In one embodiment of the present invention, the multimedia stream will begin to reach the end-user before an advertisement is inserted, as represented by diagram A in FIG. 2. In this case, an initial header slot 50 is understood by the receiving device (set-top box or computer) as the requested multimedia file. The receiving device is then properly configured to play the streaming multimedia file, which follows as segment 52 of diagram A. At some point along the playing of the file, an advertisement is inserted as segment 54 and the remainder of the multimedia stream, represented as segment 56, is appended to the end of the advertisement, as discussed above. In one example, a timing signal in the multimedia file may be used as a "trigger" to initiate the insertion of the adveristment into the stream. Alternatively, the advertisement may simply be cached and held until the end of the multimedia stream, as shown in diagram B of FIG. 2, or played as the initial segment (between the header and the streaming multimedia), as shown in diagram C. In any alternative, additional bytes may be added to the beginning and end of

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the advertisement file to create a "fade in" and "fade out" between the advertisement and requested multimedia stream, where such fading is considered to be more acceptable by the end-user than a sharp break between the independent streams.

FIG. 3 illustrates an exemplary caching inserter 30 that may be used in the system of the present invention as described above in association with FIG. 1. Included within caching inserter 30 is a first cache 60 used to store an incoming specific advertisement file, designated as stream A, from advertisement content server 60. A second cache 62 is used to store the incoming multimedia stream, designated as stream MM, where as discussed above, cache 62 is used to store incoming stream MM once advertisement stream A has begun to be "played out" toward end-user 10. An analyzer 64 is included in the communication path between the network (which may be data network 24, local distribution network 20, or any other communication network, since caching inserter 30 may be disposed at any appropriate location along the path between the various multimedia servers and end-users) and end-user 10. Analyzer 64 will detect when a multimedia stream has been received, determine the associated protocol and rate, and transmit this information to a timing and control unit 66. Other control inputs to timing and control unit 66 are from advertising content (first) cache 60 and multimedia content (second) cache 62, where control unit 66 uses the input from these caches to determine the proper stream to be played out to end-user 10. For example, unless and until a full advertisement file is loaded in first cache 60, multimedia stream MM can be played coupled in real time to end-user 10, indicated as position (1) of switch 67 of inserter 30. When control unit 66 receives a particular indication from first cache 60 (such as "EOF" received), it knows that advertisement stream A is ready to be played out and multimedia stream MM can be held. A signal is then sent from timing and control unit 66 to switch 67, requesting the switch to move to position (2), allowing the cached advertisement stream A to be sent to end-user 10. Once this process begins, multimedia stream MM will begin to be stored in second cache 62. When timing and control unit 66 receives a command that the end of the advertisement has been reached, a signal to move switch 67 to position (3) will be sent, allowing the cached multimedia stream to be sent to end-user 10. If the advertisement is inserted at the beginning of or during the multimedia stream, the received multimedia stream will need to be stored in, then played out of, second

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cache 62 for the duration of the multimedia file. A rate and/or format transcoder 68 may also be included in the signal path between first cache 60 and end-user 10 to insure that the advertisement is transmitted at the same data rate and format as the requested multimedia file, where this information has previously been retrieved by analyzer 64, or by some other means.

While the arrangement as described above illustrates the various servers as being in geographically disparate locations, it is to be understood that one or more may be co-located. Additionally, as noted above, the caching inserter of the present invention may be disposed at any location between the various content servers and the end-user. Indeed, various other modifications to the arrangement as described above will occur to those skilled in the art and are considered to fall within the spirit and scope of the present invention as defined by the claims appended hereto.

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What is claimed is:

1. An arrangement for inserting an alternative media file into a streaming multimedia file destined for at least one predetermined end-user, the arrangement comprising

a first cache for storing a received alternative media file;

a second cache for storing a streaming multimedia file;

a control unit for receiving as a first input a control signal from said first cache and generating as an output a switching control signal indicative of the presence or absence of a complete file being stored in said first cache; and

a switching mechanism, responsive to said control unit switching output signal, said first cache and said second cache for providing as an output, directed to the at least one end-user, a stream selected one of said first cache, said streaming multimedia file and said second cache, as controlled by said switching output signal from said control unit.

2. The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that a complete alternative file is stored and is ready for transmission to the predetermined at least one end-user, or will be ready in time to transmit.

3. The arrangement as defined in claim 1 wherein the control signal output from the first cache indicates that an alternative file is available to be streamed to said first cache from an external server and is ready to begin transmission to the predetermined at least one end-user.

4. The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the streaming multimedia file in the absence of a signal from the control unit that an alternative file is ready to transmit.

5. The arrangement as defined in claim 1 wherein the switching mechanism supplies as an output the cached alternative file stored in said first cache in response to a signal from the control unit that an alternative file is ready to transmit.

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6. The arrangement as defined in claim 1 wherein the control signal input to said control unit indicates that the alternative media file transfer to the predetermined at least one end-user is completed, the control unit thereafter supplying a switching output signal to said switching mechanism request said switching mechanism to supply as the output the cached streaming multimedia file.

7. The arrangement as defined in claim 1 wherein the arrangement further comprises

a billing system coupled to the control unit for receiving information from said control unit regarding the identity of each alternative media file transmitted, the identity of the at least one end-user, and related statistics regarding the transmission of various alternative media files to a plurality of different end-users.

8. The arrangement as defined in claim 7 wherein the related statistics include the number of times each alternative media file is requested during a predetermined period of time.

9. The arrangement as defined in claim 7 wherein the related statistics includes the time of day and date that each alternative media file is requested.

10. The arrangement as defined in claim 1 wherein the alternative file is defined as an advertisement file.

11. The arrangement as defined in claim 1 wherein the alternative file is defined as an emergency information file.

12. The arrangement as defined in claim 1 wherein the arrangement is disposed at a local point of presence in a communication network.

13. The arrangement as defined in claim 12 wherein the arrangement is disposed at a headend location in an HFC communication network.

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14. The arrangement as defined in claim 12 wherein the arrangement is disposed between a wide area data network and a local distribution network.

15. The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and a DSL communication network.

16. The arrangement as defined in claim 12 wherein the arrangement is disposed between a telecommunications central office and wireless communication network.

17. The arrangement as defined in claim 12 wherein the arrangement is disposed in a communications device at an end-user location.

18. The arrangement as defined in claim 17 wherein the communications device comprises a set-top box.

19. The arrangement as defined in claim 17 wherein the communications device comprises a residential gateway device.

20. The arrangement as defined in claim 1 wherein the arrangement further comprises a rule server for retrieving information related to the predetermined at least one end-user and selecting the alternative media file based on said retrieved information and the specific content of the streaming multimedia file.

21. A method of inserting an alternative media file in a streaming multimedia file destined for a predetermined end-user, the method comprising the steps of:

a) storing a selected alternative multimedia file in a first cache at a local point of presence;

b) establishing a communication link between said streaming multimedia file and said predetermined end-user;

c) transmitting said streaming multimedia file to said end-user;

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d) switching transmission from said streaming multimedia file to said alternative media file stored in said first cache;

e) storing in a second cache said streaming multimedia file received during the transmission of said alternative media file; and

f) upon completion of said alternative media file, accessing said second cache and resuming transmission of the cached streaming multimedia file.

22. The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) receiving a request from a predetermined end-user for a streaming multimedia file;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

23. The method as defined in claim 21 wherein in performing step a), the following steps are performed:

a1) detecting the start of a streaming multimedia flow;

a2) accessing a rule server with the identity of said end-user, content provider and/or content identity;

a3) using said identity to select an appropriate type of alternative file for said predetermined end-user and retrieving location information regarding said selected alternative file;

a4) sending a request for file transfer from a server storing said selected alternative file to the first cache.

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24. The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file when recognizing that an alternative file is available.

25. The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the beginning of said multimedia file.

26. The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at the end of said multimedia file.

27. The method as defined in claim 21 wherein in performing step d), switching from said streaming multimedia file to said alternative file at any location during transmission of said multimedia file.

28. The method as defined in claim 21 wherein in performing step d), providing transition segments between the streaming multimedia file and the alternative file.

29. The method as defined in claim 28 wherein the transition segments provide "fade in" and "fade out" between said files.

30. The method as defined in claim 21 wherein in performing step d), switching from said streamlining multimedia file to said alternative file based on a timing signal embedded in said streaming multimedia file.

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Abstract of the Disclosure

An arrangement for inserting advertisement media into a streaming multimedia file destined for an end-user uses a caching inserter including a first cache for storing a loaded advertisement file and a second cache for holding the streaming multimedia file that needs to be buffered as the advertisement file is sent to the end-user. The advertisement file may be inserted at the beginning of the multimedia file, the end, or at any point during the stream. Once the advertisement begins to be sent to the end-user, the incoming multimedia stream is cached and then is played out of the cache once the advertisement has ended. As a result of the time delay associated with the advertisement, the remainder of the multimedia file must be cached then played out until the stream is complete.

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Bib Data Sheet

CONFIRMATION NO. 5436

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09/734,220	12/11/2000 RULE	707	2171	D2487

APPLICANTS

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**** CONTINUING DATA ***************************

NONE TD

**** FOREIGN APPLICATIONS *********************

NONE TD

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
**** 04/30/2001**

		STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
Foreign Priority claimed	☐ yes ☒ no	CA	2	30	2
35 USC 119 (a-d) conditions met	☐ yes ☒ no ☐ Met after Allowance				
Verified and Acknowledged	Examiner's Signature / Initials				

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TITLE

Seamless arbitrary data insertion for streaming media

FILING FEE RECEIVED		
1020	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
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FEE RECORD SHEET

12/13/2000 MAHMED1 00000102 09734220

01 FC:101 710.00 OP
02 FC:103 180.00 OP

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*U.S. GPO: 2000-468-987/39595

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2000

Application or Docket Number: 09/736,220

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	30 minus 20=	* 10
INDEPENDENT CLAIMS	2 minus 3 =	*
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	355.00	OR	BASIC FEE	710.00
X$ 9=		OR	X$18=	180
X40=		OR	X80=	\
+135=		OR	+270=	\
TOTAL		OR	TOTAL	890

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
***If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

FORM PTO-875
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CLAIMS ONLY

SERIAL NO.	FILING DATE
09/734220	
APPLICANT(S)	

CLAIMS

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT			*		*		*	
	IND.	DEP.	IND.	DEP.	IND.	DEP.		IND.	DEP.	IND.	DEP.	IND.	DEP.
1	1						51						
2		1					52						
3		1					53						
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47							97						
48							98						
49							99						
50							100						
TOTAL IND.	2						TOTAL IND.						
TOTAL DEP.	28						TOTAL DEP.						
TOTAL CLAIMS	30						TOTAL CLAIMS						

* MAY BE USED FOR ADDITIONAL CLAIMS OR ADMENDMENTS

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