

DAN HERTZ

IT CONSULTANT

Email: dan@danhertz.com

Mobile: +1 (707) 276-6662

Web: danhertz.com

Linkedin: linkedin.com/in/danhertz

SKILLS

Broad IT Knowledge
Innovative Thinking
Problem Solving
Strategic Planning
Project Management
Writing/Communications
Teaching/Group Facilitation
Quick Learner

SOFTWARE/SYSTEMS

Co-inventor of two USPTO business patents relating to XML technologies.

Experience with:

AI/ML, Hugging Face, LLMs
Web/Mail Server Architecture
Cloud/VM Tools
Database/Search (SQL/SOLR)
Power BI/Power Query/Power Apps
SAP Fieldglass/SAP ECC ERP/T-Codes
Data Mining/Python Scraping
Google Analytics/SEO
XML/XSLT/XPath
Jupyter/Pandas/Visualizations
Apple/Microsoft/Linux/Android OS
Social Media Platforms
Office 365/Teams/Zoom/Adobe

LANGUAGES

English (fluent/native)
French (intermediate)
Spanish (beginner)

♥ MY COMMUNITY

Federal Elections Returning Officer,
Victoria BC
Former Board Member, Calgary Pro
Musica Society
Former Board Member, The Glencoe
Club of Calgary Fitness Committee
Computer Coach for Seniors
Front of House Assistant, Alberta
Theatre Projects/Theatre Calgary

PROFILE

Provides strategic direction for product, process and UX/CX improvement, digital best practices, modernization and ML/AI initiatives, technology adoption and implementation. Bridges and defines business unit stakeholder needs with IT implementation. Insightful thinker and idea guy.

EMPLOYMENT HISTORY

2005-Present ♦ Dan Hertz Consulting

IT Consultant

- Provided strategic direction for IT procurement and business needs, including SEO, SMM, CRM, e-commerce and Internet best practices; mobile technology, web development, business process improvement, UAT, QAT, usability/UX/UI guidelines, analytics, success metrics and KPIs.
- Coached clients on computer/mobile use, including systems and software applications. Resolved hardware/software issues, including SaaS/cloud-based tools. Lead market/product research, data gathering, competitive intelligence, cold-calling, and surveys.
- Worked with colleagues/clients to develop sound and efficient database schemas and data governance practices.
- Championed agile methodology, minimum viable products, fast prototyping and proof-of-concepts.
- Wrote and designed best-practice and policy manuals, troubleshooting guides, marketing materials, brand assets, websites and other collaterals.
- Evangelizes ChatGPT/Llama 2/Falcon LLMs to improve coding efficiency.
- Currently, architecting an AI/ML PyTorch/Hugging Face computer vision transformer model to recognize multi-lingual texts, manuscripts and letters.
- Developed a data mining tool to extract-transform-load (ETL) over 1.2 million records into a Solr search engine, enabling fast and targeted data retrieval, analytics, visualizations and automated report generation.
- Sought and co-ordinated industry participation, sponsorship and donations for not-for-profit events and organisations. Embraced vendor relationships, product selection and negotiations to drive higher profit margins, meet sales targets, improve product portfolio and customer satisfaction.

2022 ♦ Nutrien Ltd., Procurement Division

SAP Fieldglass PMO/Analyst

SAP Fieldglass

- Initiated a re-write to Nutrien's Contingent Worker expense policy.
- Highlighted seven areas of process and product improvement for SAP Fieldglass user adoption and initiatives:
 - (1) **Sharepoint Search:**
Worked with IT to troubleshoot and improve search relevancy.
 - (2) **Google Dialogflow Chatbot:**
Worked with IT to troubleshoot and improve chatbot relevancy. Networked with Google AI colleague to understand best practices for chatbot training, scripts and implementation.
 - (3) **Fieldglass Portal Design:**
Improve layout and UX; add video how-to section.
 - (4) **Change Management Training:**
Worked with Change Management team to update and develop training programme for new SAP Fieldglass Oracle implementation.
 - (5) **Update Fieldglass FAQ/QRG Documentation:**
Recommended that FAQ/QRGs be kept up-to-date to reflect changes

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TESTIMONIALS

"In meeting Daniel, one is immediately struck by his warmth, courtesy and unimposing nature. Once you get to know Daniel, you quickly realize that your initial feelings were correct and that you are dealing with a man who is very bright, articulate and people-centered. He works very well on an independent basis though he is able to be successful in a team environment."
(Dr. Gary Krivy, Registrar, The University of Calgary)

"A passionate and creative contributor, focused on finding solutions for the business problems we bring to him." (Termeh Rassi, Manager, Web Strategy, Sallie Mae, Inc.)

"A man of high integrity and creativity." (Susan Spence, Vice-President, The New York Wine and Grape Foundation)

"An innovative and creative problem solver....Despite tight timelines, he delivered outstanding results." (Carole Ekker, Project Manager, Orrick, Herrington & Sutcliffe LLP)

"On behalf of the GST Task Force, I would like to thank you for the excellent work you have done....You have been responsible, thorough, cheerful, and have always met your deadlines. The hours you worked were demanding and we are all grateful for your efforts which helped keep the Minister, members of his staff, members of the Task Force and Department well informed." (Barbara Uteck, Director of Operations, GST Communication Task Force, Government of Canada)

in Fieldglass workflow, procedures and implementations. Additionally, that metadata be tagged to support Sharepoint search.

(6) **Microsoft Power Apps Integration:**

Worked with IT to troubleshoot and fix Microsoft Power Apps tenure approval process; utilize Microsoft Power Apps to automate processes.

(7) **Email Automation:**

Developed a Microsoft Power Automate Outlook App to parse IT ticket issues, generating email template with the ticket details.

SAP Fieldglass – ERP/ECC/Ariba Integration

- Improved workflow by coding Microsoft Power Query/Power BI queries to solve SAP ECC client invoice reconciliation issues.
- Used SAP ECC T-Codes to troubleshoot and verify invoice/timesheet data.
- As Fieldglass PMO, responsible for managing day-to-day client and customer issues with Fieldglass sustainment, including job postings, approvals, new vendor setup, Service Now and Ariba/ECC IT requests.
- As member of the Fieldglass technical team, worked with developers to debug/fix/RCA Fieldglass issues.
- Lead ticket issue meetings with our technical team. Acted as a technical resource for encryption, Linux, UX, IA and other issues.

SAP Fieldglass – Oracle ERP Integration

- Created Microsoft Project GANTT chart to track SAP-Oracle development – from initiation through SIT/UA testing and project launch.
- Participated in, highlighted and tracked UAT issues.

2002-2005 ♦ Sallie Mae Inc., e-Commerce and Internet Strategy Divisions

Sr. Online Consumer Experience Architect/Sr. Graphic Designer

- Spearheaded a 2,000-page sales force portal to streamline business processes, improve internal and stakeholder information exchange, and provide access to market research, product information, sales tools, brand insights, analytics and competitive intelligence data.
- Advised on the development of a custom-collateral print solution to solve sales force inefficiencies, shorten sales time, reduce errors and generate more than 3 million customized pages. Consulted on, and helped draft, systems and UX requirements, RFP needs and vendor assessments.
- Conceived and developed a text-messaging system to reduce call centre volume, improve customer communications and save over \$685,000 in call-center costs.
- Email campaign templates generated over \$215,000 in new revenue.

OTHER

Government of Canada

• **Media Analyst, Department of Finance**

Briefed the Canadian Finance Minister, Prime Minister's Office and Minister for State daily on media reaction to the Goods and Services Tax (GST) implementation, Finance Department programmes, policies and initiatives.

• **Information Officer, GST Communication Task Force**

Fielded and answered questions about the Goods & Services Tax.

CERTIFICATIONS

- LinkedIn Learning: Python, XML, JSON (on-going, see [portfolio](#))
- USPAP for Personal Property (American Society of Appraisers, 2010)

EDUCATION

- The University of Calgary, Bachelors of Fine Arts

Client List

Canada



Government
of Canada

Gouvernement
du Canada



orrick

SallieMae®

AXIS POINT
CAPITAL



In the
Public Eye

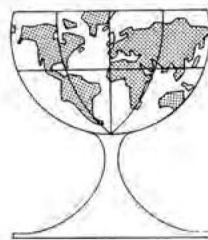


theatre:
CALGARY



UNIVERSITY OF
CALGARY

CPM | **Calgary**
ProMusica



**FOCUS
WINES**
*Wine & Spirit
Merchants*

566287 Ontario Ltd.





INDEPENDENT FAMILY
DISTILLERS SINCE 1887

WILLIAM GRANT & SONS



LAMBERTI

Melini

Casa Fondata Nel 1705



DISTELL
CRAFTING BRANDS SINCE 1925



BEARSPAW
— COUNTRY CLUB —



COOKING SCHOOL

Certifications



LinkedIn LEARNING

Certificate of Completion

Congratulations,

Visual Studio Code for Python Developers

Course completed on Feb 10, 2021 at 06:56PM UTC • 59 min

By continuing to learn, you have expanded your perspective, sharpened your skills, and made yourself even more in demand.

A handwritten signature in black ink that reads "Dan Bodnity".

Head of Content Strategy, Learning

LinkedIn Learning
1000 W Maude Ave
Sunnyvale, CA 94085

Certificate Id: AZhevjwm00IT41OuIAXtw6AQVOz9



LinkedIn LEARNING

Certificate of Completion

Congratulations,

Learning Python

Course completed on Feb 13, 2021 at 06:35PM UTC • 2 hours 27 min

By continuing to learn, you have expanded your perspective, sharpened your skills, and made yourself even more in demand.

A handwritten signature in black ink, reading "Dan Bodnity".

Head of Content Strategy, Learning

LinkedIn Learning
1000 W Maude Ave
Sunnyvale, CA 94085

Certificate Id: AYLtqAud9XKDWZIAEsxd_QcmIXQ9



LinkedIn LEARNING

Certificate of Completion

Congratulations,

Python: XML, JSON, and the Web

Course completed on Feb 05, 2021 at 12:40PM UTC • 1 hour 38 min

By continuing to learn, you have expanded your perspective, sharpened your skills, and made yourself even more in demand.

A handwritten signature in black ink that reads "Dan Bodnity".

Head of Content Strategy, Learning

LinkedIn Learning
1000 W Maude Ave
Sunnyvale, CA 94085

Certificate Id: AakBTM4ZATrkD0JGfRG_474EstWh



LinkedIn LEARNING

Certificate of Completion

Congratulations,

XML Essential Training

Course completed on Feb 10, 2021 at 06:44PM UTC • 2 hours 38 min

By continuing to learn, you have expanded your perspective, sharpened your skills, and made yourself even more in demand.

A handwritten signature in black ink that reads "Dan Bodnity".

Head of Content Strategy, Learning

LinkedIn Learning
1000 W Maude Ave
Sunnyvale, CA 94085

Certificate Id: AaCoBrCluYL1TeinV-6xCJ-RkLG



The American Society of Appraisers

555 Herndon Parkway, Herndon, VA 20170

presents this

Certificate of Achievement to

Dan Hertz

who has taken the class

for the American Society of Appraisers' 15-hour course

**SE100PP: USPAP for Personal Property,
Gems & Jewelry and Machinery & Technical Specialties**

October 16, 2010

Date



Sabri Math, Director of Education and Accreditation

XML/XHTML Patents

Based on my initial work utilizing xml technologies to transform content, Sallie Mae, Inc. applied for, and received two business patents from the USPTO.

The concepts were applied to a custom-collateral print solution that solved sales force inefficiencies, shortened sales time, reduced errors and generated more than 3 million customized pages.

(XML/XSLT/XPath, Apache Cocoon, Microsoft SQL Server, Visio, Word, Excel and Visual SourceSafe; Adobe Fireworks, Illustrator Photoshop and Acrobat)



US007605942B2

(12) **United States Patent**
Bush et al.

(10) **Patent No.:** **US 7,605,942 B2**
(45) **Date of Patent:** **Oct. 20, 2009**

(54) **METHOD AND APPARATUS FOR CREATING
PRINTED DOCUMENTS AND INTERNET
WEB PAGES**

(75) Inventors: **Eric F. Bush**, Centreville, VA (US);
James Lewandowski, Potomac Falls,
VA (US); **Daniel Hertz**, Peoria, AZ
(US); **Libby Dollison**, Oakton, VA (US);
Caryn A. Allen, Great Falls, VA (US)

(73) Assignee: **Sallie Mae, Inc.**, Reston, VA (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 669 days.

(21) Appl. No.: **11/172,919**

(22) Filed: **Jul. 5, 2005**

(65) **Prior Publication Data**

US 2006/0112324 A1 May 25, 2006

Related U.S. Application Data

(60) Provisional application No. 60/585,926, filed on Jul. 8,
2004.

(51) **Int. Cl.**
G06F 15/00 (2006.01)
G06F 3/00 (2006.01)

(52) **U.S. Cl.** **358/1.18; 715/744**

(58) **Field of Classification Search** 358/1.18,
358/1.15, 1.14, 1.13; 715/205, 234, 243,
715/700, 744; 705/1, 6, 9, 39-40; 709/222-223,
709/206, 248

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,529,214 B1 *	3/2003	Chase et al.	715/744
2001/0032178 A1	10/2001	Adams et al.	
2002/0048037 A1	4/2002	Carbone	
2002/0129061 A1	9/2002	Swart et al.	
2002/0147652 A1	10/2002	Gheith et al.	
2003/0055871 A1	3/2003	Roses	
2003/0208397 A1 *	11/2003	VanDusen	705/14

* cited by examiner

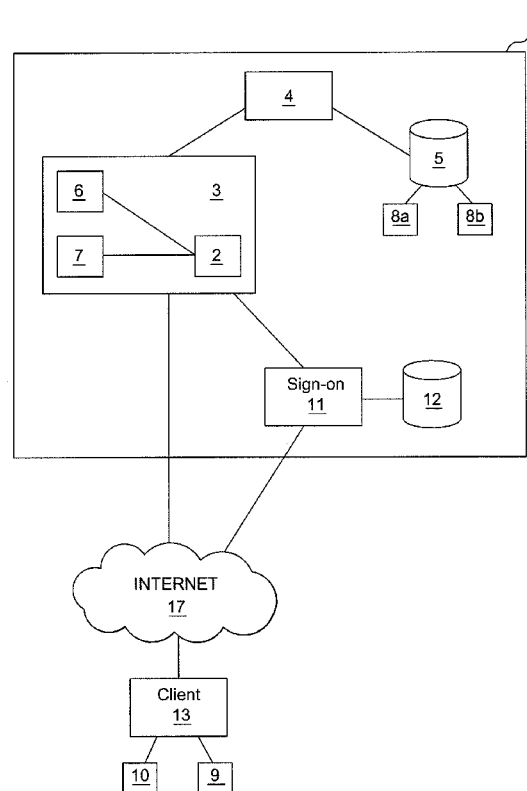
Primary Examiner—Saeid Ebrahimi Dehkordy

(74) *Attorney, Agent, or Firm*—Dickstein Shapiro LLP

(57) **ABSTRACT**

Embodiments of the invention provide a system, computer program product and method for creating printed documents and Web pages. A user interface is provided. Through the user interface a first user can select from among a plurality of document templates; complete each of the selected document templates simultaneously, and view the completed document templates.

19 Claims, 24 Drawing Sheets



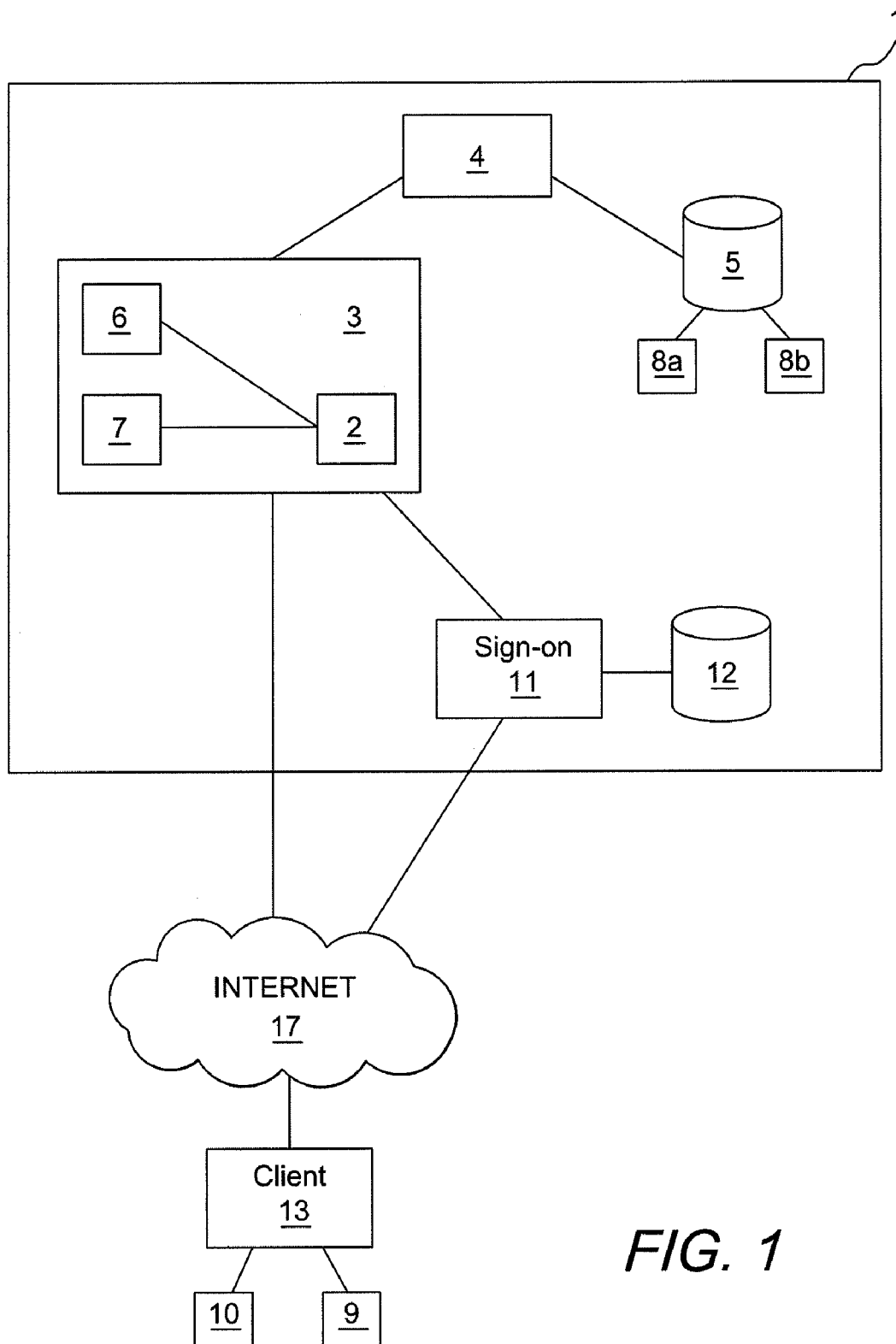
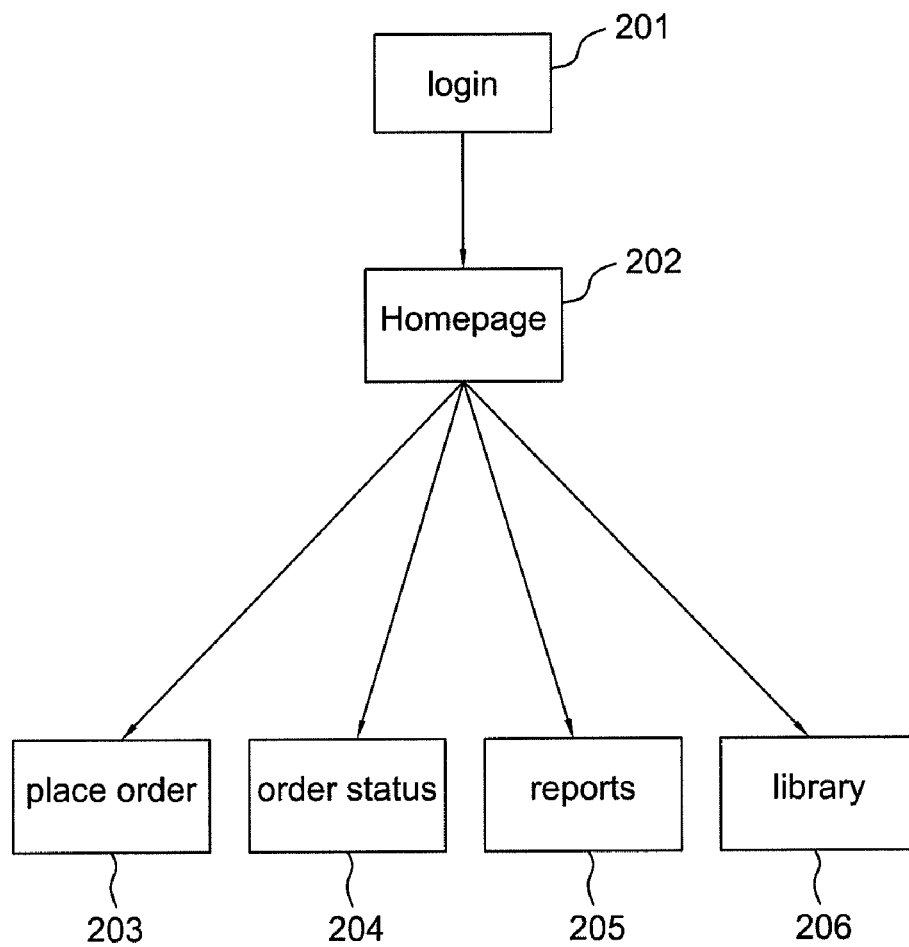


FIG. 1

*FIG. 2*

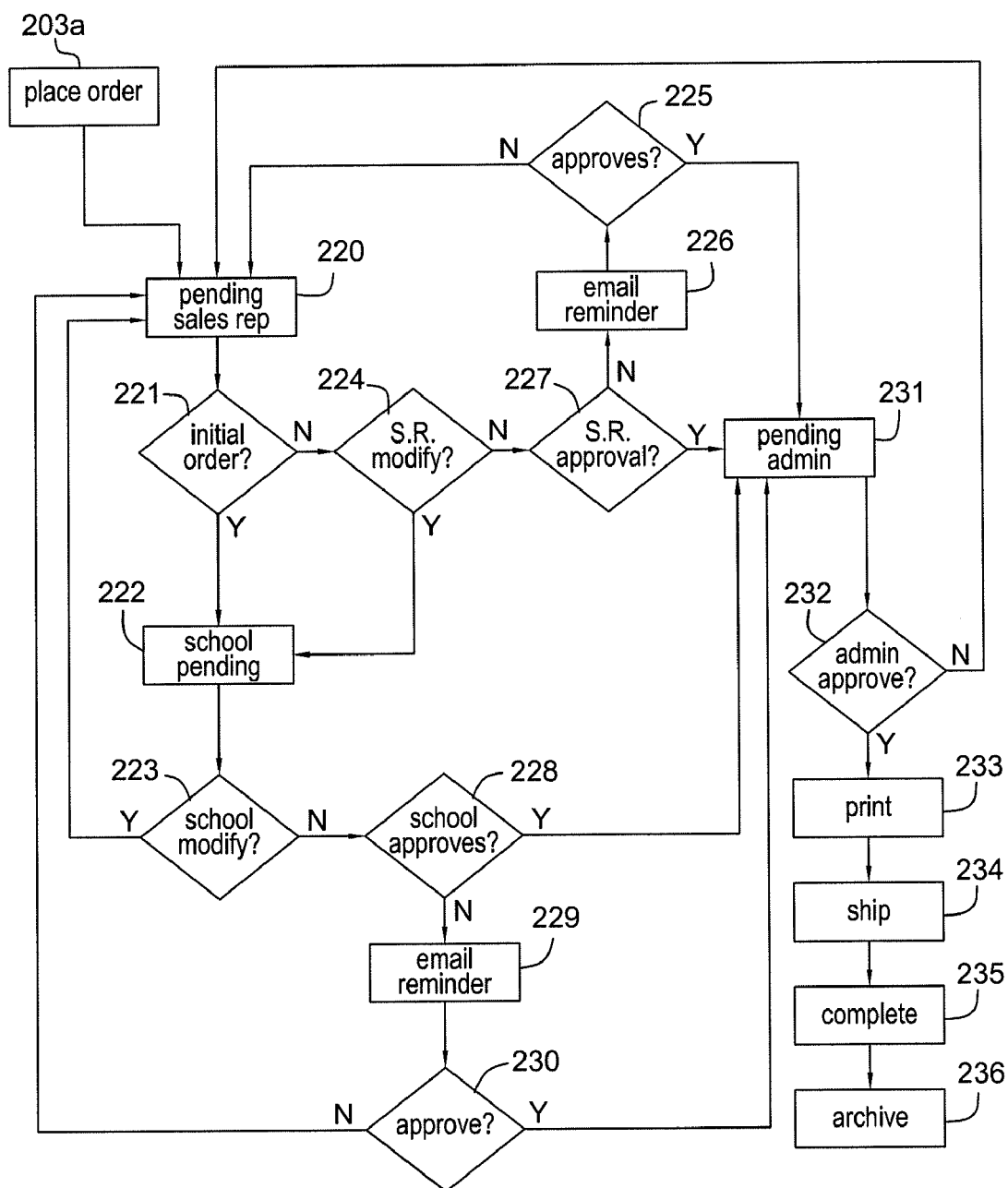
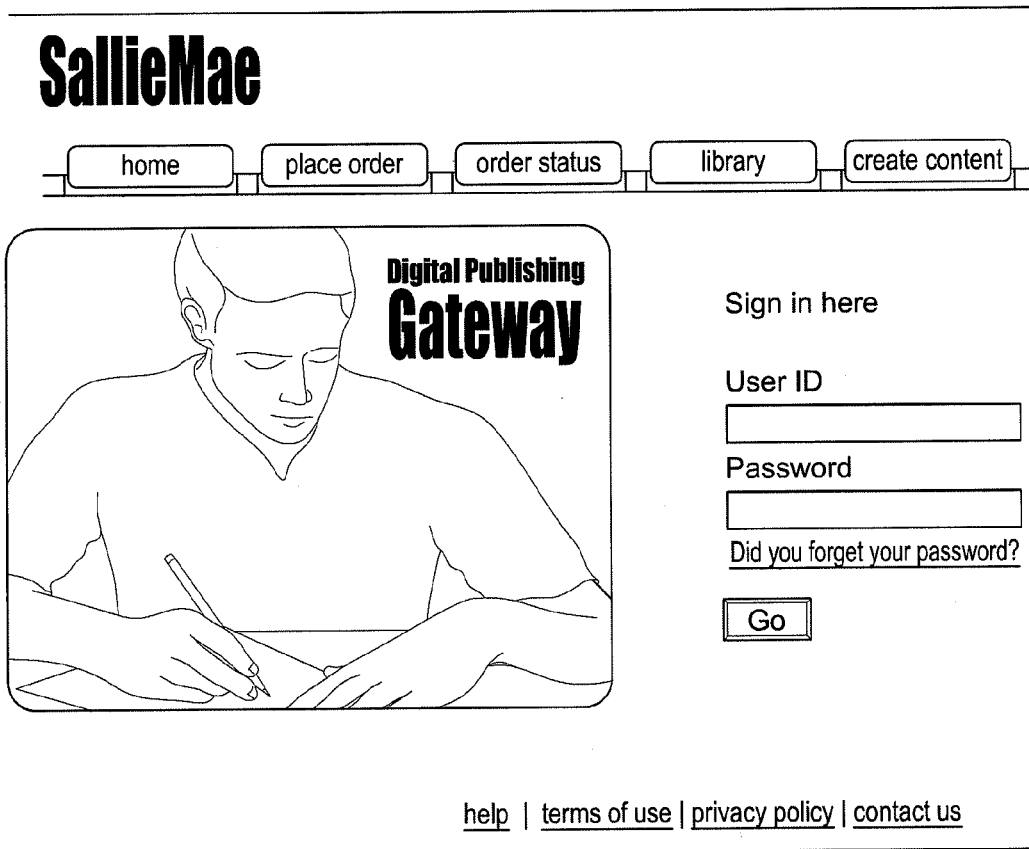


FIG. 3



201

FIG. 4A

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METHOD AND APPARATUS FOR CREATING PRINTED DOCUMENTS AND INTERNET WEB PAGES

CROSS-REFERENCE TO RELATED APPLICATIONS

This patent application claims the benefit of U.S. provisional patent application Ser. No. 60/585,926, filed Jul. 8, 2004, entitled "METHOD AND APPARATUS FOR THE SIMULTANEOUS CREATION OF PRINTED DOCUMENTS AND XHTML/HTML INTERNET WEB." U.S. provisional patent application Ser. No. 60/585,926 is hereby incorporated by reference.

FIELD OF THE INVENTION

The present invention relates generally to a method and system and computer program for Internet World Wide Web-based services, and more specifically to a system and method for creating and transforming digital documents into formats acceptable for printing and display on devices used for viewing Internet Web pages.

BACKGROUND OF THE INVENTION

With the advent of the Internet, more and more businesses in a wide range of industries have been adopting new technologies for improved distribution of information contained in traditionally printed documents onto Web pages can that be viewed through the Internet using devices that can retrieve and view this information in a digital format. These technological advances have increased productivity and efficiency so that faster distribution of information, greater efficiency, greater effectiveness, and more customized solutions are becoming the expected norm for communicating information in a digital form. The increase in customized and personalized distribution of information has also had a positive impact on business-to-business transactions, as companies, individuals and other entities, including educational and financial institutions, are working together more to create customized solution to tailored to a customer's needs.

Educational institutions and financial institutions have adopted technologies to improve the dissemination of financial aid information to consumers, such as students, potential students, and their families. For example, both educational and financial institutions may offer information about financing a college or graduate education in both printed documents and digital Internet Web pages. Educational and financial institutions have traditionally created printed "brochures" containing this information and distributed these documents manually to interested customers.

For example, the institution may create a printed document that contains information about how a student can apply for a Stafford student loan. The document may contain information that has been specifically customized for a particular institution. The printed document may contain colors, images, and contact information specific to that institution. Traditionally, printed documents have been created using an iterative process where several drafts of the document are communicated between the customer institution(s), a print design company, and a print production company. On occasion, the print design company and the print production company are the same company. The "drafts" of the document have traditionally been communicated to each party manually, using a fax machine, or postal mail and any requested changes to the document manually marked on the "draft"

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printed document. Once the contents of the document have been modified to the agreement of all parties, a final proof of the document is created by the print design firm using any number of proprietary document design and print software products. The final document proof is then sent to the printer for production printing of the document.

More recently, a new technological process has emerged to eliminate the need to communicate drafts of printed documents manually, via fax, or postal mail. Many companies have begun to offer a service known as "Web-to-print" for printed document creation and review. This process will typically utilize a digital document format from Adobe Corporation known as "PDF." The PDF digital document can be constructed to represent a very close facsimile to an equivalent printed document.

The most common "Web-to-print" document creation process requires the creation of a digital document created in PDF format. The PDF file is communicated via the Internet between the customer, the print design firm, and the print production company as an email attachment. The document is then opened and viewed using Adobe's freely distributed PDF viewer allowing the reader of the document to electronically note and communicate desired changes to the document. Once the digital PDF is ready for printing, the file is sent directly to the print device for production printing of the document. This process has become popular as it significantly reduces the time required to distribute and approve "draft" variations of the document prior to authorizing sending a document to a printing device for production printing of documents.

As the Internet has matured and has become readily accessible to many, industries, including education and financial institutions, have created Internet Web pages that are used to communicate the same information that is contained in printed documents. Today the process for creating these Web pages utilizes a different set of technologies, skills, and systems to build them. An institution will typically contract with a company that employs people that know how to build and deploy Internet Web systems and pages. The institution will work with the Web page design and development company to create Web pages that will communicate the information that the institution desires to be communicated to its customers that visit the institution's Web site. The company that designs and develops the printed documents is rarely the same company that will build the Internet Web pages. As a consequence of this technology divergence, institutions must now use two very different processes for creating their printed documents and their Web pages, which often contain the same or similar information.

An observation could be made that the print production industry considers the use of Internet Web pages as a threat to its industry as it will over time reduce the need to distribute information utilizing printed documents. In a similar fashion, the Internet Web page development companies and technology development firms believe that the production of printed documents is a dying industry and therefore these companies have no desire to offer products, services, or technologies that aid the production of printed documents.

Thus, there is a need for an online suite of easy-to-use tools to help automate the cumbersome process of ordering, cus-

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tomizing and printing materials, both for the creation of printed documents and Web-based versions of the same documents.

BRIEF SUMMARY OF THE INVENTION

The invention provides a system and method which allow users to create and view, using an Internet Web page capable viewing device, a digital document that can be sent directly to a print device for production printing, and a Web page that contains the same information contained in the digital document that will be printed.

The system comprises a computer network, at least one client computer in communication with the computer network that can view Web pages, a network attached computing device capable of hosting a computer application, a network attached device capable of storing and managing digital documents and digital document assets, and at least one connection to the Internet. The system uses an application program to provide a guided experience for helping the user simultaneously create a digital representation of a document that will be printed as a hard copy document and a Web page that can be viewed on an Internet-attached Web page viewing device. The digital document transformation system can simultaneously create a variety of Web pages and digital document formats that can be viewed using any device capable of attaching to the Internet and that has the capability of displaying the digital document file format.

BRIEF DESCRIPTION OF THE DRAWINGS

Additional features of the present invention will be apparent from the following detailed description and drawings which illustrate exemplary embodiments of the invention.

FIG. 1 is an overview of the system according to a preferred embodiment of the present invention;

FIG. 2 is an structure for a Web Site according to an exemplary embodiment of the present invention;

FIG. 3 is a flow chart depicting the approval process for a customized print document and/or Web page order;

FIG. 4A is computer monitor screen view of the login Web page of the Web Site of FIG. 2;

FIG. 4B is a computer monitor screen view of the homepage of the Web Site of FIG. 2;

FIG. 4C is a computer monitor screen view of the place order portion of the Web Site of FIG. 2;

FIG. 4D-4G are computer monitor screen views depicting the general collateral ordering portion of the Web Site of FIG. 2;

FIG. 4H-4I are computer monitor screen views of the library portion of the Web Site of FIG. 2;

FIG. 4J-4M are computer monitor screen views of the custom sales kit ordering portion of the Web Site of FIG. 2;

FIGS. 4N-4Q are a computer monitor screen view of the custom print documents and Web pages ordering portion of the Web Site of FIG. 2;

FIGS. 4R-4S are a computer monitor screen view of the order status portion of the document transformation system; and

FIG. 5 is a chart showing the reporting options available to the different user status from FIG. 2.

DETAILED DESCRIPTION OF THE INVENTION

In the following detailed description, reference is made to the accompanying drawings, which form a part hereof and show by way of illustration specific embodiments that the

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invention may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that other embodiments may be utilized, and that structural and logical changes may be made without departing from the spirit and scope of the present invention. The progression of process steps described is exemplary of embodiments of the invention; however, the sequence of steps is not limited to that set forth herein and may be changed, with the exception of steps necessarily occurring in a certain order.

The present invention is for a computer system, method and computer-program product which allow users to simultaneously create and view, using an Internet Web page capable viewing device, a digital document that can be sent directly to a print device for production printing and a Web page that contains the same information contained in the digital document that will be printed.

As illustrated in FIG. 1, the digital document transformation system 1 comprises a computer network 4, a network-attached computing device 3 capable of hosting a computer application (e.g., a server), a network-attached device 5 capable of storing and managing digital documents 8a and digital document assets 8b (e.g., a database), and at least one connection to the Internet 17. The digital document transformation system 1 includes a Web Site 2 that provides a guided experience by which the users 9, 10 can create a digital representation of a digital document that will be printed as a hard copy document and/or a Web page that can be viewed on an Internet-attached Web page viewing device. The digital document transformation system 1 can simultaneously create a variety of Web pages and digital document formats that can be viewed using any device capable of attaching to the Internet 17 and that has the capability of displaying the digital document file format.

The Web Site 2 is accessible from outside of the digital document transformation system 1 by way of a client computer 13 with access to the Internet 17. The Web Site 2 provides access to the users 9, 10 to the document creation and editing module 6 and the kit creation module 7, which are described in more detail below. In the illustrated embodiment, user 9 can be, for example, a sales representative from a lending institution or a representative from a school financial aid office. User 10 is an administrative user, who manages the system 1. Optionally, user 10 can have direct access to the computer network 4 and need not access the system 1 via the Internet.

Users 9, 10 sign-on to the digital document transformation system 1 through the sign-on module 11, which is in communication with the digital document transformation system 1. The sign-on module 11 allows user 9, 10 access to the system 1 only after a valid sign-in and until the user 9, 10 logs out of the digital document transformation system 1. The sign-on module 11 additionally comprises at least one database or other known storage unit 12 for storing data associated with the users 9, 10, and is configured to update the data associated with the users 9, 10 and store the updated data in the database 12. Further, the sign-on module allows the system 1 to recognize the user 9, 10 type. The system 1 then configures the available content based on that user type as described in more detail below.

FIG. 2 depicts an exemplary structure for the Web Site 2 of the present invention. The user 9, 10 will first see the log-in screen 201. A screen shot of the log-in screen 201 is shown in FIG. 4A. On the log-in screen 201, the user will enter a username (email address) and a masked password. If the user 9, 10 forgets his/her password, he/she will be asked a challenge question, to which they are provided the answer when

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registering with the site. Separate log-in pages and URLs are available for different users (i.e. for different lending institutions and schools using the application) if desired. Once logged in to the system, the user will be taken to the homepage **202**. A screen shot of the homepage **202** can be seen in FIG. **4B**. The homepage includes content in the left-hand navigation which is reserved for second level navigation beyond the homepage. Upon entering the site, users **9** will be provided a summary of their pending and completed orders, as well as any outstanding saved-in-progress orders, as shown in FIG. **4B**. Administrative users **10** can be presented with different information, for example, a summary of all pending orders in the system **1**.

The navigational options available from the homepage include place order **203**, order status **204**, reports **205**, and library **206**. Other navigational options, such as a log-out option, can be included as desired. Not all navigation options will be available to all users **9**, **10** of the application. Only the available options will be shown to any given user **9**, **10**. The available options are based upon the status of the user, e.g. sales representative **9**, school representative **9**, or administrator **10**.

FIG. **4C** is a screen shot of the place order page **203**. From the place order page **203**, users **9** can order general collateral, which are general pre-defined informational materials. For example, a school representative user **9** could place an order for printed brochures regarding a variety of student loan types to be distributed to students through the school financial aid office. FIGS. **4D-4I** and **4M** show the general collateral order pages **401** through **407** and **410** of the Web Site **2**.

As shown in FIG. **4D**, the user **9** selects the entity he/she wishes to place an order for on page **401**. In the illustrated example, the user **9** chooses to place an order for a school, so on page **403** (FIG. **4E**), the user **9** can search for the desired school and select that school from among the search results on page **402** (FIG. **4F**). The user then verifies the school information at page **404** (FIG. **4G**).

To select a product to order, the user **9** is directed to the "library" **206** portion of the Web Site **2** (FIG. **2**). The library **206** can contain documents that are available for order, as well as documents that are for exemplary purposes only and not available for order. Users **9** can also browse the library **206** directly from the homepage **202** (FIG. **4B**).

Upon entering the library **206** portion of the Web Site **2**, the user **9** is presented with a search page **405** (FIG. **4H**). Once the user **9** enters search criteria, the user **9** is presented with the list of materials meeting the search criteria on a library search results page **406** (FIG. **4I**). From the results page **406**, the user **9** can preview the documents and select documents to order.

Once the user **9** has chosen products to order, the user is directed to the order checkout page **410** (FIG. **4M**). At page **410**, the user **9** enters or confirms shipping information.

Users **9** can also place an order for a custom sales kit using the kit creation module **7**. The kit creation module **7** is a computer program application running on the network-attached computing device **3** and gives users **9** the ability to create a sales kit for a desired recipient. The user **9** can create a kit including: a customized cover letter, pre-defined informational materials arranged in a desired order and a business card. The kits can then be sent by the administrative entity directly to the desired recipient. In this manner the user **9**, for example, a sales representative from a lending institution, can easily and conveniently follow up with sales, e.g. the sales representative chooses the product sell sheets and other materials needed to complete the follow up kit and the packet of materials is generated to send to a school.

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FIGS. **4J-4M** are screen shots of the custom sales kit ordering pages **407**, **408**, **409**, **410** of the Web Site **2**. Page **407** (FIG. **4J**) allows the user **9** to create a cover letter for the kit. On page **408** (FIG. **4K**), the user selects the information items that will be included in the kit. In the illustrated example, the user **9** can search all available items and choose from among the search results. The user **9** is then able to determine the order that the selected items will appear in the kit via page **409** (FIG. **4L**). At the check out page **410** (FIG. **4M**), the user **9** can enter the shipping information for the kit and confirm the order.

Optionally, the module **7** allows a user **9** to save an order to the network-attached device **5** at any time during the ordering process. When a user **9** saves an order it is shown as a pending order.

FIGS. **4N-4Q** illustrate the custom print documents and Web pages place order pages **411**, **412**, **413**, **414** of the Web Site **2**. Creation of the print documents and Web pages is supported by the document creation and editing module **6**, which is a computer program application running on the network-attached computing device **3**.

Upon selecting the custom print documents and Web pages place order option, the user **9** is presented with page **411** (FIG. **4N**) where the user can select the templates for the print document and Web page to be created. Any variety of templates can be made available to the user **9**, as desired. Exemplary Web page templates include, among other things, welcome pages, and transition pages. After the user has selected the templates, the user chooses to create the content for the print document and Web page via page **412** (FIG. **4O**). In the illustrated embodiment, the user **9** can enter information about a school, images, a greeting and text. Other options can be made available depending on the selected template and as desired. The information entered by the user **9** are stored on the network-attached device **5** as the digital documents **8b**.

Once the user **9** has created the content, the user can preview the printed document as a PDF file at page **413**, as shown in FIG. **4P**. Likewise, the user can preview the Web page containing the same information at page **414**, as shown in FIG. **4Q**. Thus, the user **9** can create print and Web documents containing the same information conveniently and simultaneously. These documents are on the network-attached device **5** as the digital document assets **8a**.

Optionally, the module **6** allows a user **9** to save an order to the network-attached device **5** at any time during the ordering process. When a user **9** saves an order it is shown as a pending order.

In the illustrated embodiment, it can be desirable to coordinate the involvement of more than one type of user. For example, when a sales representative **9** places an order using print documents and Web pages place order portion of the Web Site **2** on behalf of a school, it is desirable to allow the school's representative **9** to preview and modify the order before it is printed or published on the Web to ensure that the school is satisfied. For this, the invention provides an approval process.

FIG. **3** illustrates the approval process for a print and/or Web order. The approval process is supported by the document creation and editing module **6**. The approval process is described in connection with an order placed by a lending institution sales representative **9**. It should be understood that a school representative **9** could also initiate an order.

Since the sales representative **9** placed the order, the first status is "Pending—Sales Representative" **220**. Once the order is complete, at step **221**, the status changes to "Pending—School" **222** at which point the school representative **9** can either modify **223** or approve **228** the order. If the school

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representative 9 modifies the order at step 223, then the status returns to "Pending—Sales Representative" 220 where the sales representative 9 can either modify 224 or approve 227 the order as well since the sales representative 9 will be considering a modified order, rather than an initial order. If the sales representative 9 has modified the order at step 224, it would go back to "Pending—School" 222, and repeat the process from there.

If the sales representative 9 has not modified the order at step 224, and the sales representative 9 approves the order at step 227, the status changes to "Pending—Administrator" 231. If the sales representative has not approved the order at step 227, an email reminder 226 is sent to the sales representative 9 at predetermined intervals until approval at step 225. If there is no approval at step 225, the status remains as "Pending—Sales Representative" 220. If there is approval at step 225, the status changes to "Pending—Administrator" at step 231.

Referring back to step 223, when the school representative 9 does not modify the order and instead approves the order at step 228, then the status changes to "Pending-Administrator" 231. If the school representative 9 does not approve the order at step 228, an email reminder 229 is sent and if no approval is received within a set time frame, the order status returns to "Pending—Sales Representative" 220. If there is approval at step 230, the status changes to "Pending—Administrator" 231.

From the "Pending—Administrator" 231 status, if the administrator 10 does not approve the order at step 232, the status returns to "Pending—Sales Representative" 220, and the process continues from there. If the administrator 10 does approve the order at step 232, the order continues through the rest of the order approval process which includes the steps of print 233, ship 234, complete 235 and archive 236. The approval process for a Web order is similar, where the "Pending" statuses of the print process correspond with the "In-Development" statuses of the Web process.

The functions available on the "order status" 204 portion of FIG. 2 include, but are not limited to, a list of the incomplete or saved items that is searchable by order status, searchable order history, and the option to duplicate a previous order from the order history. Screenshots of the "Order Status" pages 415 and 416 are shown in FIGS. 4R and 4S. There are several options for the status of an order as it works its way through the approval process. For a print order, the order status options are pending—sales representative, pending—school, pending—administrator, printing, shipping, completed, and archived. For a Web order, the order status options are in-development—sales representative, in-development—school, in-development—administrator, testing, live, and archived. The variations in the "pending" and "in-development" statuses are based on the rights of the given user.

FIG. 5 illustrates the "reports" 205 portion of the Web Site 2 shown in FIG. 2. The chart shows the reports which are available in a preferred embodiment of the invention and the status of the users 9, 10 who can view the given reports. Other reports may also be included in the reports section beyond those illustrated in FIG. 3C, if desired. In addition to the reports, tools are also available in the reports/tools section 205. Tools available include modifying passwords (all users 9, 10), adding/modifying schools (school representatives 9 and administrators 10), creating new users (administrators 10), changing static templates (administrators 10), and email reports.

The processes and devices described above illustrate preferred methods and typical devices of many that could be used and produced. The above description and drawings illustrate

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exemplary embodiments, which achieve the objects, features, and advantages of the present invention. It is not intended, however, that the present invention be strictly limited to the above-described and illustrated embodiments. Any modifications of the present invention that come within the spirit and scope of the following claims should be considered part of the present invention.

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. A digital document transformation system, comprising:
 - a computer network;
 - a network-attached computing device comprising:
 - a document creation and editing module for simultaneously creating a print document that can be sent directly to a print device for printing and a Web page that can be published to a Web site; and
 - a Web site providing a user interface to the document creation and editing module, wherein the user interface facilitates selection of a print document template and a Web page template from a plurality of document templates and input of content information for simultaneously completing the selected print document and Web page templates such that the document creation and editing module simultaneously creates the print document and the Web page with the same content information; and
 - a first storage device connected to the computer network for storing the content information, the print document, and the Web page; and a sign-on module connected to the computer network for controlling access to the document creation and editing module, wherein the sign-on module allows the system to recognize an identity of a user and customize the Web site according to provide the user identity.
2. The system of claim 1, wherein the document creation and editing module is configured to allow different users to preview, modify, and approve the content information for the printed document and the page.
3. The system of claim 2, wherein the document creation and editing module is further configured to notify at least one of the different users when the printed document and the associated Web page are ready for approval.
4. The system of claim 1, further comprising a kit creation module for creating a custom sales kit comprising a cover letter and pre-defined documents arranged in a user-defined order.
5. The system of claim 4, wherein the user interface allows a user to select the user-defined order that the pre-defined documents will appear within the custom sales kit.
6. The system of claim 4, wherein the user interface allows a user to input shipping information to designate a recipient of the custom sales kit.
7. The system of claim 1, wherein the plurality of document templates includes a plurality of print document templates and a plurality of Web page templates, and the selected print document template is different from the selected Web page template.
8. A digital document transformation system, comprising:
 - a computer network;
 - a network-attached computing device comprising:
 - a document creation and editing module for simultaneously creating a print document that can be sent directly to a print device for printing and a Web page that can be published to a Web site;

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- a kit creation module for creating a custom sales kit, wherein the custom sales kit includes a cover letter and pre-defined documents arranged in a user-defined order; and
- a Web site providing a user interface to the document creation and editing module and the kit creation module, wherein the user interface facilitates selection of a print document template from a plurality of print document templates and a Web page template from a plurality of Web page templates and input of content information for simultaneously completing the selected print document and Web page templates such that the document creation and editing module simultaneously creates the print document and the Web page with the same content information;
- a first storage device connected to the computer network for storing information associated with the document creation and editing module and the kit creation module;
- a sign-on module connected to the computer network for controlling user access to the digital document transformation system; and
- a second storage device connected to the computer network for storing user information.
9. The system of claim 8, wherein the document creation and editing module is configured to allow different users to preview, modify, and approve the content information for the printed document and the associated Web page.
10. The system of claim 9, wherein the document creation and editing module is further configured to notify at least one of the different users when the printed document and the associated Web page are ready for approval.
11. The system of claim 10, wherein the document creation and editing module is further configured to send a reminder notification to the at least one of the different users at predetermined intervals until the printed document and the associated Web page are approved.
12. The system of claim 8, wherein the user interface allows a user to select the user-defined order that the pre-defined documents will appear within the custom sales kit.
13. The system of claim 8, wherein the user interface allows a user to input shipping information to designate a recipient of the custom sales kit.

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14. A computer readable medium encoded with a document creation and editing program for causing a computer in communication with a computer network and a storage device to execute the steps of:

providing an interface for placing an order, the interface facilitating selection of a print format template and a Web page format template from among a plurality of document templates and input of content information that can be used to simultaneously create a print document according to the selected print format template and a Web page that can be published to a Web site according to the selected Web page format template such that the simultaneously created print document and Web page contain the same content information;

storing the content information, the print document, and the Web page in the storage device; and

displaying the print document and the Web page on the interface; Wherein the interface further allows for different parties to preview, modify, and approve the content information for simultaneously creating the print document and the Web page.

15. The computer readable medium of claim 14, wherein the selected print format template is different from the selected Web page format template.

16. The computer readable medium of claim 14, wherein the interface further allows for the creation of a custom sales kit comprising a cover letter and pre-defined documents arranged in a user-defined order.

17. The computer readable medium of claim 16, wherein the interface further allows a user to select the user-defined order that the pre-defined documents will appear within the custom sales kit.

18. The computer readable medium of claim 16, wherein the interface further allows the user to input shipping information to designate a recipient of the custom sales kit.

19. The computer readable medium of claim 14, further comprising the step of storing the order and a status of the order in the storage device.

* * * * *

Data Analysis + Automation

Shopify Scraper

Asynchronous downloading of product and price data,
exporting results to csv (or excel) format.

(Python, Pandas, Requests-html, Visual Studio Code IDE)

```

25 from datetime import datetime
26 from bs4 import BeautifulSoup
27 from lxml import etree, html
28 from dataclasses import dataclass
29
30 # Async Requests
31 from requests_html import AsyncHTMLSession
32
33 async_session = AsyncHTMLSession() # Start Async Session
34
35 # The Shopify Scraper Function
36 async def get_url(url: str, total_pages: int, pp_limit: int):
37     result_set = []
38     url = url
39     total_pages = total_pages
40     pp_limit = pp_limit # Per page limit (i.e. no of items per page, Shopify max = 250)
41     time1 = time.perf_counter() # Start timer to see how long this all takes
42     for x in range(1, total_pages):
43         querystring = {"page": f"{x}", "limit": pp_limit}
44         headers = {
45             "cookie": "secure_customer_sig=; _orig_referrer=; _landing_page=%2F; _y=19ab9ac8-f9a4-4",
46             "dnt": "1",
47             "upgrade-insecure-requests": "1",
48             "user-agent": "Mozilla/5.0 (Linux; Android 6.0; Nexus 5 Build/MRA58N) AppleWebKit/537.3",
49             "accept": "text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,",
50             "sec-fetch-site": "none",
51             "sec-fetch-mode": "navigate",
52             "sec-fetch-user": "?1",
53             "sec-fetch-dest": "document",
54             "accept-language": "en-CA,en-GB;q=0.9,en;q=0.8,fr-CA;q=0.7,fr;q=0.6,es-US;q=0.5,es;q=0.",
55             "sec-gpc": "1",
56         }
57         response = await async_session.get(url, headers=headers, params=querystring)
58         # Wait just a bit, to make sure all the json has been received
59         time.sleep(0.3)
60         data = response.json()

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Code

6	updated_at	14 non-null	object
7	vendor	14 non-null	object
8	product_type	14 non-null	object
9	tags	14 non-null	object
10	variants	14 non-null	object
11	images	14 non-null	object
12	options	14 non-null	object
13	sku	14 non-null	object
14	price	14 non-null	object

dtypes: int64(1), object(14)

memory usage: 1.8+ KB

None

~~~~~

Entire task finished in 1.9677218360000004 seconds (0.03279536393333334 minutes)



```

10
11 import requests
12 import re
13 import json
14 import time
15 import csv
16 import pprint
17 import pandas as pd
18 import functools
19 import os
20 import sys
21 import logging
22 import logging.config
23

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Code

|   | id            | title                                | ... | sku | price |
|---|---------------|--------------------------------------|-----|-----|-------|
| 0 | 6720840106045 | 3-Piece Cocktail Shaker Set          | ... | NaN | 20.00 |
| 1 | 6653774954557 | Distemperance Mulled Haskap Mocktail | ... | NaN | 20.00 |
| 2 | 6649911607357 | Cocktail Gift Box                    | ... | NaN | 45.00 |
| 3 | 6648252071997 | Token Flying Team Pocket Tee         | ... | NaN | 46.00 |
| 4 | 6648255643709 | Token Flying Team Dad Hat            | ... | NaN | 35.00 |

[5 rows x 15 columns]

<class 'pandas.core.frame.DataFrame'>

RangeIndex: 14 entries, 0 to 13

Data columns (total 15 columns):

| #  | Column       | Non-Null Count | Dtype  |
|----|--------------|----------------|--------|
| 0  | id           | 14 non-null    | int64  |
| 1  | title        | 14 non-null    | object |
| 2  | handle       | 14 non-null    | object |
| 3  | body_html    | 14 non-null    | object |
| 4  | published_at | 14 non-null    | object |
| 5  | created_at   | 14 non-null    | object |
| 6  | updated_at   | 14 non-null    | object |
| 7  | vendor       | 14 non-null    | object |
| 8  | product_type | 14 non-null    | object |
| 9  | tags         | 14 non-null    | object |
| 10 | variants     | 14 non-null    | object |
| 11 | images       | 14 non-null    | object |
| 12 | options      | 14 non-null    | object |
| 13 | sku          | 14 non-null    | object |
| 14 | price        | 14 non-null    | object |

dtypes: int64(1), object(14)

memory usage: 1.8+ KB

None

Entire task finished in 1.9677218360000004 seconds (0.03279536393333334 minutes)

[Done] exited with code=0 in 4.74 seconds

| <div> <div>HomeInsertDrawPage LayoutFormulasDataReviewViewTell me</div> <div> <div> <div>Paste</div> <div> <div>Calibri (Body)</div> <div>12</div> <div>A<sup>+</sup></div> <div>A<sup>-</sup></div> </div> <div> <div>B</div> <div>I</div> <div>U</div> <div></div> <div></div> <div></div> <div></div> </div> <div> <div></div> <div></div> <div></div> </div> </div> <div> <div> <div></div> <div></div> </div> <div> <div></div> <div></div> </div> <div> <div></div> <div></div> </div> </div> <div> <div>%</div> <div>Number</div> </div> <div> <div>Conditional Formatting</div> <div>Format as Table</div> <div>Cell Styles</div> </div> <div> <div>Cells</div> <div>Editing</div> </div> </div> <div> <div>H2</div> <div>2022-02-18T14:07:32-07:00</div> </div> </div> |               |                             |                             |     |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------|-----------------------------|-----|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A             | B                           | C                           | D   | E     | F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | G           |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | id            | title                       | handle                      | sku | price | body_html                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | published_a |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6720840106045 | 3-Piece Cocktail Shaker Set | 3-piece-cocktail-shaker-set | NaN | 20.00 | <p>&lt;p&gt;&lt;em&gt;New to Cocktail making or Bartending? Get our 3-Piece Cocktail Shaker Set and shake things up like a professional! &lt;/em&gt;&lt;/p&gt;</p> <p>&lt;p&gt;This classy trio is made from High Quality Stainless Steel and is perfect to begin your bartending journey.&lt;/p&gt;</p> <p>&lt;p&gt;This Shaker comes with a leakproof lid with a built in strainer, the mixing tool is sleek and durable, finally we have a two in one jigger. All of these products combined creates a unique experience for everyone</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2022-02-22T |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6653774954557 | Distemperance Mulled Ha     | distemperance-mulled-hask   | NaN | 20.00 | <p>&lt;p data-mce-fragment="1"&gt;Key flavours: Haskap berries, spices (star anise, cinnamon, clove, allspice, black peppercorn), orange (zest &amp; fresh squeezed juice). Apple cider vinegar &amp; chili add some acidity &amp; sharpness. Token Calder Chai bitters to round off the flavour profile.&lt;/p&gt;</p> <p>&lt;p data-mce-fragment="1"&gt;&lt;span style="font-style: inherit !important; font-weight: inherit !important;" data-mce-fragment="1" data-mce-style="font-style: inherit !important; font-weight: inherit !important;" data-mce-fragment="1"&gt;&lt;meta charset="utf-8"&gt;&lt;span data-mce-fragment="1"&gt;Looking for interesting gift options? Here's our cocktail gift box!&lt;/span&gt;&lt;/p&gt;</p> <p>&lt;p&gt;&lt;br data-mce-fragment="1"&gt;&lt;span data-mce-fragment="1"&gt;This custom cocktail box has all the ingredients to make 4 amazing cocktails using our 4 unique flavours curated specially for you. Just add your favourite alcohol, follow the recipe and enjoy the magic of our bitters.&lt;/span&gt;&lt;/p&gt;</p> | 2021-11-29T |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6649911607357 | Cocktail Gift Box           | cocktail-gift-box           | NaN | 45.00 | <p>&lt;p&gt;&lt;br data-mce-fragment="1"&gt;&lt;span data-mce-fragment="1"&gt;This custom cocktail box has all the ingredients to make 4 amazing cocktails using our 4 unique flavours curated specially for you. Just add your favourite alcohol, follow the recipe and enjoy the magic of our bitters.&lt;/span&gt;&lt;/p&gt;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2021-11-25T |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6648252071997 | Token Flying Team Pocket    | token-flying-team-pocket-te | NaN | 46.00 | <p>&lt;meta charset="utf-8"&gt;&lt;span data-mce-fragment="1"&gt;You don't have to quit your day job to be part of our pack. The Token Flying Team line is for the entire community of people who work together to lift up the industry and each other. These tees are limited edition, so don't hold back. Birds of a feather can fly high together.&lt;/span&gt;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2021-11-25T |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6648255643709 | Token Flying Team Dad Ha    | token-flying-team-dad-hat   | NaN | 35.00 | <p>&lt;meta charset="utf-8"&gt;&lt;span data-mce-fragment="1"&gt;You don't have to quit your</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2021-11-25T |

tokenbitters.com

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# **Covid-19 Visualization**

Analyze and visualize Alberta's Covid-19  
new daily case counts.

(Jupyter Notebook, Python, Pandas, Requests, Matplotlib,  
Seaborn, Visual Studio Code IDE)

# Alberta Health Covid-19 Data Analysis

Goal is to visualize Alberta's *new daily Covid-19 case counts -- sorted by date*. I will also create and overlay a *7-day simple moving average* trendline.

AB Health CSV Data Licence: <https://open.alberta.ca/licence>.

This file was last modified by Dan Hertz on 2021-09-17. (c) 2021 Dan Hertz.

## Step I: Import classes

```
In [1]: import io
import requests
import datetime as dt

# PANDAS
import pandas as pd
from pandas import DataFrame as df

# MATPLOTLIB
import matplotlib as mpl
from matplotlib import pyplot as plt
mpl.rc_file_defaults()
%matplotlib inline
%config InlineBackend.figure_format = 'retina'

# SEABORN
import seaborn as sns
sns.reset_orig()
```

## Custom Functions

```
In [2]: # Pass in a URL for the csv file you want to retrieve.
def get_data(url):
    r = requests.get(url)
    s = requests.get(url).content
    try:
        # Make sure response="ok" (200-300) and length > 0
        if (r.ok) and (len(s) > 0):
            print(f"Got URL: {r.status_code}")
            return make_df(s)
        else:
            print(
                f"Could not get URL, or data is empty. Error is: {r.status_code}"
            )
    except:
        print(
            f"Exception in try block. Could not get URL. Error is: {r.status_code}"
        )
```

```
In [3]: # Create our DataFrame from the returned csv file
def make_df(s):
    # AB Health returns 403 forbidden error if I call the CSV directly with read_csv("..."),
    # so using requests library
    data=pd.read_csv(io.StringIO(s.decode('utf-8')))
    pd.set_option("display.max_rows", 15)
    pd.set_option("display.max_columns", 100)
    pd.set_option('display.width', 1000)
    df = pd.DataFrame(data).rename(columns=str.lower) # Lower case all column names, common in python
    df.columns = df.columns.str.replace(' ', '_') # Replace column name spaces with underscore
    return df
```

## STEP II: Get CSV File and create Pandas DataFrame

```
In [4]: # Alberta Health has a csv containing daily confirmed covid cases. We will download that file.
# See https://www.alberta.ca/stats/covid-19-alberta-statistics.htm#data-export
# If using url:
url="https://www.alberta.ca/data/stats/covid-19-alberta-statistics-data.csv"
df = get_data(url)

# If using local file...good for testing, so you don't keep hitting their server:
# df = pd.read_csv("covid-19-alberta-statistics-data-20210910.csv")

# Make sure df is not empty:
```

```

try:
    if (len(df) > 0):
        print(df)
    elif df is None:
        print("Error: df is empty")
    else:
        print("No df to display")
except:
    print("Exception in try block: df is empty")

```

Got URL: 200

|        | unnamed: 0 | date_reported | alberta_health_services_zone | gender | age_group   | case_status | case_type |
|--------|------------|---------------|------------------------------|--------|-------------|-------------|-----------|
| 0      | 1          | 2020-11-13    | Calgary Zone                 | Female | 1-4 years   | Recovered   | Confirmed |
| 1      | 2          | 2021-04-21    | Edmonton Zone                | Male   | 30-39 years | Recovered   | Confirmed |
| 2      | 3          | 2021-05-17    | North Zone                   | Male   | 10-19 years | Recovered   | Confirmed |
| 3      | 4          | 2020-12-13    | Edmonton Zone                | Male   | 5-9 years   | Recovered   | Confirmed |
| 4      | 5          | 2021-01-05    | Central Zone                 | Male   | 50-59 years | Recovered   | Confirmed |
| ...    | ...        | ...           | ...                          | ...    | ...         | ...         | ...       |
| 277553 | 277554     | 2021-08-04    | North Zone                   | Male   | 20-29 years | Recovered   | Confirmed |
| 277554 | 277555     | 2021-03-02    | Central Zone                 | Female | 50-59 years | Recovered   | Confirmed |
| 277555 | 277556     | 2021-09-02    | North Zone                   | Female | 50-59 years | Recovered   | Confirmed |
| 277556 | 277557     | 2021-06-02    | North Zone                   | Male   | 20-29 years | Recovered   | Confirmed |
| 277557 | 277558     | 2021-01-01    | Central Zone                 | Male   | 30-39 years | Recovered   | Confirmed |

[277558 rows x 7 columns]

## Step III: Clean up data

In [5]:

```

# Let's get column names as list
list(df.columns)

```

Out[5]:

```

['unnamed: 0',
 'date_reported',
 'alberta_health_services_zone',
 'gender',
 'age_group',
 'case_status',
 'case_type']

```

In [6]:

```

# Rename some columns to be a bit shorter whilst still descriptive
rename_cols = {"unnamed: 0": "line_no", "date_reported": "reported", "alberta_health_services_zone": "zone"}
df.rename(columns=rename_cols, inplace = True)
print(df)

```

|        | line_no | reported   | zone          | gender | age_group   | case_status | case_type |
|--------|---------|------------|---------------|--------|-------------|-------------|-----------|
| 0      | 1       | 2020-11-13 | Calgary Zone  | Female | 1-4 years   | Recovered   | Confirmed |
| 1      | 2       | 2021-04-21 | Edmonton Zone | Male   | 30-39 years | Recovered   | Confirmed |
| 2      | 3       | 2021-05-17 | North Zone    | Male   | 10-19 years | Recovered   | Confirmed |
| 3      | 4       | 2020-12-13 | Edmonton Zone | Male   | 5-9 years   | Recovered   | Confirmed |
| 4      | 5       | 2021-01-05 | Central Zone  | Male   | 50-59 years | Recovered   | Confirmed |
| ...    | ...     | ...        | ...           | ...    | ...         | ...         | ...       |
| 277553 | 277554  | 2021-08-04 | North Zone    | Male   | 20-29 years | Recovered   | Confirmed |
| 277554 | 277555  | 2021-03-02 | Central Zone  | Female | 50-59 years | Recovered   | Confirmed |
| 277555 | 277556  | 2021-09-02 | North Zone    | Female | 50-59 years | Recovered   | Confirmed |
| 277556 | 277557  | 2021-06-02 | North Zone    | Male   | 20-29 years | Recovered   | Confirmed |
| 277557 | 277558  | 2021-01-01 | Central Zone  | Male   | 30-39 years | Recovered   | Confirmed |

[277558 rows x 7 columns]

In [7]:

```

# "line_no" can be deleted (we'll use index number instead)
del df['line_no']

```

In [8]:

```

if len(df) > 0:
    df.info() #Get summary df info

```

```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 277558 entries, 0 to 277557
Data columns (total 6 columns):
#   Column          Non-Null Count  Dtype
---  ---
0   reported        277558 non-null  object
1   zone            277558 non-null  object
2   gender          277558 non-null  object
3   age_group       277558 non-null  object
4   case_status     277558 non-null  object
5   case_type       277558 non-null  object
dtypes: object(6)
memory usage: 12.7+ MB

```

In [9]:

```

# Convert "reported" column values from string datatype to datetime datatype
df['reported'] = df['reported'].astype('datetime64[ns]')

```

```
df['reported'] = pd.to_datetime(df['reported'], format='%y%m%d')
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 277558 entries, 0 to 277557
Data columns (total 6 columns):
#   Column          Non-Null Count  Dtype
---  ---
0   reported        277558 non-null  datetime64[ns]
1   zone            277558 non-null  object
2   gender          277558 non-null  object
3   age_group       277558 non-null  object
4   case_status     277558 non-null  object
5   case_type       277558 non-null  object
dtypes: datetime64[ns](1), object(5)
memory usage: 12.7+ MB
```

```
In [10]: # Strip the "years" string from "age_group", as we might want to use the numbers later on
df['age_group'] = df['age_group'].replace('\s?years', '', regex=True)
df
```

```
Out[10]:
```

|        | reported   | zone          | gender | age_group | case_status | case_type |
|--------|------------|---------------|--------|-----------|-------------|-----------|
| 0      | 2020-11-13 | Calgary Zone  | Female | 1-4       | Recovered   | Confirmed |
| 1      | 2021-04-21 | Edmonton Zone | Male   | 30-39     | Recovered   | Confirmed |
| 2      | 2021-05-17 | North Zone    | Male   | 10-19     | Recovered   | Confirmed |
| 3      | 2020-12-13 | Edmonton Zone | Male   | 5-9       | Recovered   | Confirmed |
| 4      | 2021-01-05 | Central Zone  | Male   | 50-59     | Recovered   | Confirmed |
| ...    | ...        | ...           | ...    | ...       | ...         | ...       |
| 277553 | 2021-08-04 | North Zone    | Male   | 20-29     | Recovered   | Confirmed |
| 277554 | 2021-03-02 | Central Zone  | Female | 50-59     | Recovered   | Confirmed |
| 277555 | 2021-09-02 | North Zone    | Female | 50-59     | Recovered   | Confirmed |
| 277556 | 2021-06-02 | North Zone    | Male   | 20-29     | Recovered   | Confirmed |
| 277557 | 2021-01-01 | Central Zone  | Male   | 30-39     | Recovered   | Confirmed |

277558 rows × 6 columns

```
In [11]: # Strip the "Zone" string from ahs_zone column values
df['zone'] = df['zone'].replace('\s?Zone', '', regex=True)
df
```

```
Out[11]:
```

|        | reported   | zone     | gender | age_group | case_status | case_type |
|--------|------------|----------|--------|-----------|-------------|-----------|
| 0      | 2020-11-13 | Calgary  | Female | 1-4       | Recovered   | Confirmed |
| 1      | 2021-04-21 | Edmonton | Male   | 30-39     | Recovered   | Confirmed |
| 2      | 2021-05-17 | North    | Male   | 10-19     | Recovered   | Confirmed |
| 3      | 2020-12-13 | Edmonton | Male   | 5-9       | Recovered   | Confirmed |
| 4      | 2021-01-05 | Central  | Male   | 50-59     | Recovered   | Confirmed |
| ...    | ...        | ...      | ...    | ...       | ...         | ...       |
| 277553 | 2021-08-04 | North    | Male   | 20-29     | Recovered   | Confirmed |
| 277554 | 2021-03-02 | Central  | Female | 50-59     | Recovered   | Confirmed |
| 277555 | 2021-09-02 | North    | Female | 50-59     | Recovered   | Confirmed |
| 277556 | 2021-06-02 | North    | Male   | 20-29     | Recovered   | Confirmed |
| 277557 | 2021-01-01 | Central  | Male   | 30-39     | Recovered   | Confirmed |

277558 rows × 6 columns

```
In [12]: # Finally, let's sort index records by reported date, ascending (oldest-to-newest):
df.sort_values(by='reported', ascending=True)
```

```
Out[12]:
```

|        | reported   | zone     | gender | age_group | case_status | case_type |
|--------|------------|----------|--------|-----------|-------------|-----------|
| 259303 | 2020-03-06 | Calgary  | Female | 50-59     | Recovered   | Confirmed |
| 227899 | 2020-03-09 | Calgary  | Male   | 30-39     | Recovered   | Confirmed |
| 257745 | 2020-03-09 | Edmonton | Male   | 60-69     | Recovered   | Confirmed |

|        | reported   | zone     | gender | age_group | case_status | case_type |
|--------|------------|----------|--------|-----------|-------------|-----------|
| 270881 | 2020-03-09 | Calgary  | Female | 30-39     | Recovered   | Confirmed |
| 245662 | 2020-03-09 | Edmonton | Female | 70-79     | Recovered   | Confirmed |
| ...    | ...        | ...      | ...    | ...       | ...         | ...       |
| 215938 | 2021-09-16 | Edmonton | Female | 40-49     | Active      | Confirmed |
| 119979 | 2021-09-16 | Central  | Female | 5-9       | Active      | Confirmed |
| 119976 | 2021-09-16 | Edmonton | Male   | 1-4       | Active      | Confirmed |
| 28404  | 2021-09-16 | Edmonton | Female | 20-29     | Active      | Confirmed |
| 161231 | 2021-09-16 | Calgary  | Female | 5-9       | Active      | Confirmed |

277558 rows × 6 columns

## Step III (b): Make sure data has no missing values

```
In [13]: # Okay, data is in good format, now let's make sure there are no empty (NaN or Null) values
df.isna().values.any() #Can also use .isnull. "False" means no null values (that's good!)
```

Out[13]: False

```
In [14]: # Not getting any null values, but if you do, you can count them with:
# df.isna().sum()
# and then replace any null values with N/A or 0, depending on field datatype.
# Use the ".fillna('N/A') or .fillna(0)" method
```

## Step IV: Analysis

Goal is to visualize Alberta's **new daily Covid-19 case counts -- sorted by date**. I will also create and overlay a **7-day simple moving average** trendline.

```
In [15]: # Lets start some analysis
# Group each reported incident by date and return a count (reported cases/day):
covid_by_freq = df.reported.value_counts(normalize=False) # Highest Covid days to lowest
print(covid_by_freq)
```

```
2021-04-30    2406
2021-05-04    2279
2021-05-05    2176
2021-04-28    2056
2021-05-07    2052
...
2020-03-13      8
2020-03-11      7
2020-03-09      6
2020-03-12      3
2020-03-06      1
Name: reported, Length: 558, dtype: int64
```

```
In [16]: # To sort by date:
covid_by_date = covid_by_freq.sort_index()
print(covid_by_date)
print(type(covid_by_date))
```

```
2020-03-06      1
2020-03-09      6
2020-03-10      9
2020-03-11      7
2020-03-12      3
...
2021-09-12    1580
2021-09-13    1436
2021-09-14    1655
2021-09-15    1727
2021-09-16    2039
Name: reported, Length: 558, dtype: int64
<class 'pandas.core.series.Series'>
```

```
In [17]: # Note: We can normalize this to show "the relative frequencies of the unique values."
# Src: https://pandas.pydata.org/pandas-docs/stable/reference/api/pandas.Series.value_counts.html
df.reported.value_counts(normalize=True).sort_index()
```

Out[17]: 2020-03-06      0.000004



```

2020-03-09    0.000022
2020-03-10    0.000032
2020-03-11    0.000025
2020-03-12    0.000011
...
2021-09-12    0.005693
2021-09-13    0.005174
2021-09-14    0.005963
2021-09-15    0.006222
2021-09-16    0.007346
Name: reported, Length: 558, dtype: float64

```

In [18]:

```

# Let's make the Series data result into a DataFrame
# Src: https://stackoverflow.com/questions/47136436/python-pandas-convert-value-counts-output-to-dataframe
df_covid_by_date = df["reported"].value_counts(normalize=False).reset_index()
df_covid_by_date.columns = ['reported', 'total_cases']
df_covid_by_date = df_covid_by_date.sort_values(by='reported', ascending=True)
print(df_covid_by_date)

```

```

      reported  total_cases
557 2020-03-06           1
555 2020-03-09           6
552 2020-03-10           9
554 2020-03-11           7
556 2020-03-12           3
..         ...         ...
39  2021-09-12        1580
58  2021-09-13        1436
29  2021-09-14        1655
21  2021-09-15        1727
5   2021-09-16        2039

```

[558 rows x 2 columns]

In [19]:

```

# Create a rolling 7-day simple moving-average and add it as a column.
# The first few entries will not have a value, until we get to day 7.
# The NaN will need to be converted to integer 0.
# Since will have added six (0) integer values at the start,
# any statistical operations would need to account for this.

df_covid_by_date['sma_7d'] = df_covid_by_date['total_cases'].rolling(7).mean()
print(df_covid_by_date.isna().sum())
# If there are NaN (Null) values, we will fill them with integer 0
if len(df_covid_by_date.isna().sum()) > 0:
    df_covid_by_date['sma_7d'] = df_covid_by_date['sma_7d'].fillna(0)

# Print sum again to make sure there are no NaN
print()
print(df_covid_by_date.isna().sum())

# Convert sma_7d values to integers
df_covid_by_date['sma_7d'] = df_covid_by_date['sma_7d'].astype(int)
print(df_covid_by_date.iloc[0:10]) # Example of getting 7day moving average
df_covid_by_date.describe() # Get some statistics about dataset

```

```

reported      0
total_cases   0
sma_7d        6
dtype: int64

reported      0
total_cases   0
sma_7d        0
dtype: int64

      reported  total_cases  sma_7d
557 2020-03-06           1         0
555 2020-03-09           6         0
552 2020-03-10           9         0
554 2020-03-11           7         0
556 2020-03-12           3         0
553 2020-03-13           8         0
542 2020-03-14          22         8
551 2020-03-15          11         9
539 2020-03-16          24        12
550 2020-03-17          11        12

```

Out[19]:

```

      total_cases  sma_7d
count  558.000000  558.000000
mean    497.415771  487.657706
std    549.806879  531.045268
min      1.000000   0.000000

```



|     | total_cases | sma_7d      |
|-----|-------------|-------------|
| 25% | 81.500000   | 84.250000   |
| 50% | 243.500000  | 248.000000  |
| 75% | 751.750000  | 755.750000  |
| max | 2406.000000 | 2044.000000 |

In [20]:

```
# Draw chart
import datetime as dt
from matplotlib.lines import Line2D
%config InlineBackend.figure_format = 'png' # 'retina' setting distorts image on mobile
dt_now = dt.datetime.now()
df_cbd = df_covid_by_date

# Figure styles
sns.set_style("whitegrid", {'grid.color': '.7', 'xtick.bottom': True})
sns.set_context("paper", font_scale=1.35, rc={"axes.titlesize":24,"axes.labelsize":16,'dpi': 100})

# Plot Size
plt.figure(figsize=(15, 10))

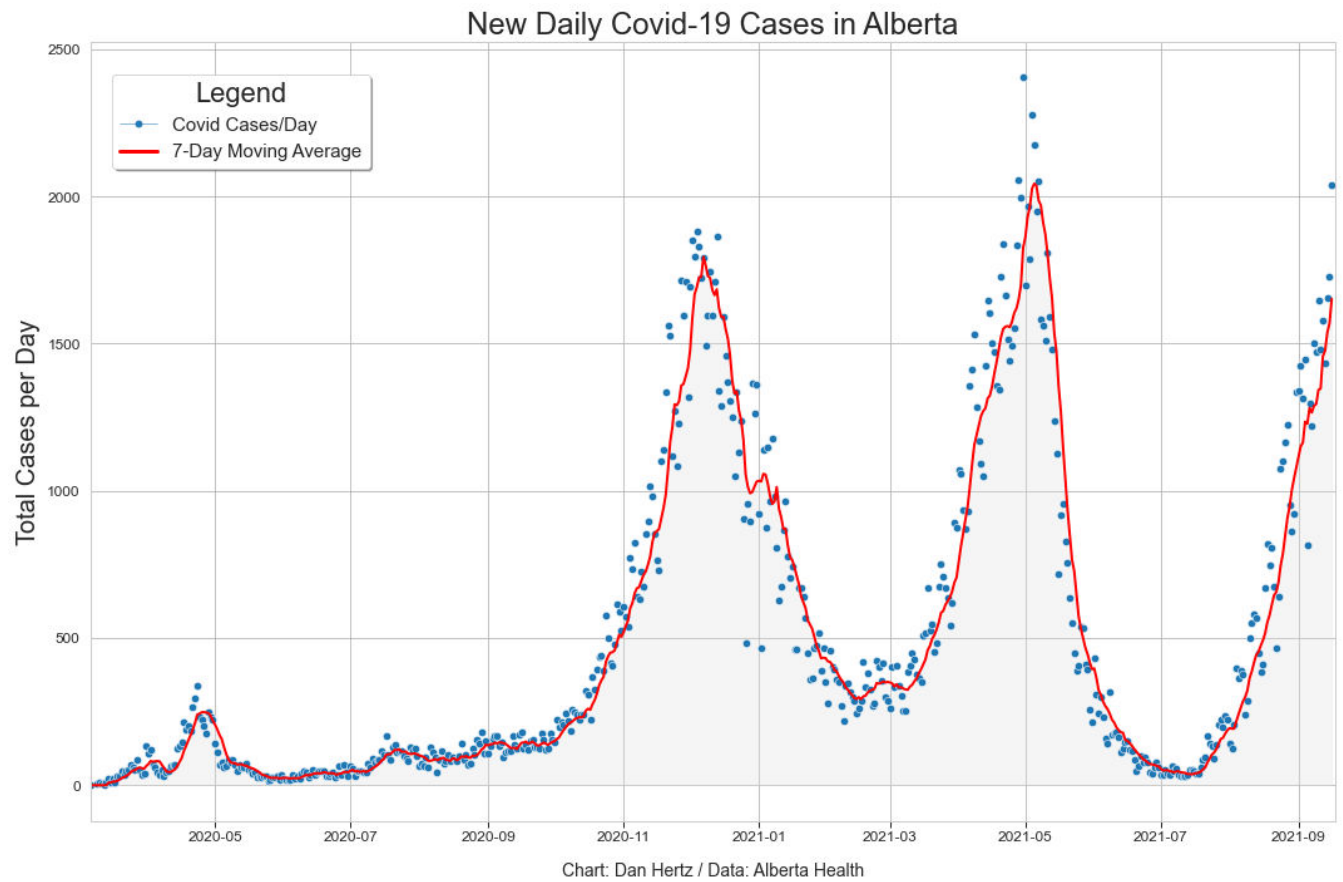
# The 7-day simple moving average as shaded line plot:
# Shading to bottom x-axis for better U/X
ax = sns.lineplot(data=df_cbd, x='reported', y='sma_7d', linewidth=2, color="red");
ax.fill_between(df_cbd.reported, df_cbd.sma_7d, color="#e0e0e0", alpha=0.3)
# You can restrict output to only a certain date range, pass in your start yyyy, m, d:
# ax.set_xlim([dt.date(2020, 8, 1), dt.datetime.now()])
ax.set_xlim([df_cbd.reported.iloc[0], dt.datetime.now()])

# The daily Covid-19 case counts as a scatterplot
sns.scatterplot(data=df_cbd, x='reported', y='total_cases', marker='o', s=40);

# Legend and Titles
legend_elements = [Line2D([0], [0], marker='o', lw=0.5, label='Covid Cases/Day'),
                   Line2D([0], [0], lw=3, color='r', label='7-Day Moving Average')]
plt.legend(fontsize = 15, \
          bbox_to_anchor= (0.01, 0.97), \
          loc='upper left', \
          title="Legend", \
          title_fontsize = 22, \
          shadow = True, \
          facecolor = 'white', \
          handles=legend_elements
          )
plt.title('New Daily Covid-19 Cases in Alberta', fontsize=24)
plt.xlabel('Chart: Dan Hertz / Data: Alberta Health', labelpad=15, fontsize=14)
plt.ylabel('Total Cases per Day', labelpad=5, fontsize=20)
plt.tight_layout()

# If you want to remove borders, use:
# sns.despine()

# Store fig in variable or you get a blank image when saved 'gcf()' = get current figure
f = plt.gcf()
# Save .png chart to local folder
f.savefig(f'df_covid_by_date_{dt_now}.png', bbox_inches='tight', dpi=100)
```



In [21]:

```
# Finally, let's export the covid_by_date DataFrame to csv, excel and json (in case we want to use it in the future)
dt_now = dt.datetime.now()
df_covid_by_date.to_csv(f'ab_covid_by_date_{dt_now}.csv', index=True) #CSV
df_covid_by_date.to_excel(f'ab_covid_by_date_{dt_now}.xlsx', index=True) #Excel
df_covid_by_date.to_json(f'ab_covid_by_date_columns_{dt_now}.json', index=True, orient='columns', date_format="iso") #JSC
df_covid_by_date.to_json(f'ab_covid_by_date_records_{dt_now}.json', index=True, orient='records', date_format="iso") #JSC
df_covid_by_date.to_json(f'ab_covid_by_date_index_{dt_now}.json', index=True, orient='index', date_format="iso") #JSON In
```

# **Automated Report Builder**

Scraped, and extract-transfer-loaded, 1.2M records into SOLR indices. Built an automated report generator to query Solr, perform aggregation and currency calculations, create visualizations and output the entire document to pdf.

(Solr, Apache Cocoon, XML/XSLT/XPath, JS/JQuery, Google Charts, Apache FOP)



**Product: Chateau Lafite Rothschild**

**Vintage: 2000**

**Volume: 750mL**

**Currency: USD**

Report Date: March 11, 2012

Effective Date of Report: January 1, 2011

Number of Pages (including cover): 15

Prepared For: Dan Hertz Consulting

18 Prominence Path S.W., Calgary Canada, dan@danhertz.com, +1.707.276.6662



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## Charts



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## LOT SALES

(PRICE/BOTTLE\* USD, 535 RECORDS)

\* Converted to USD using the sale date's ECB spot rate.

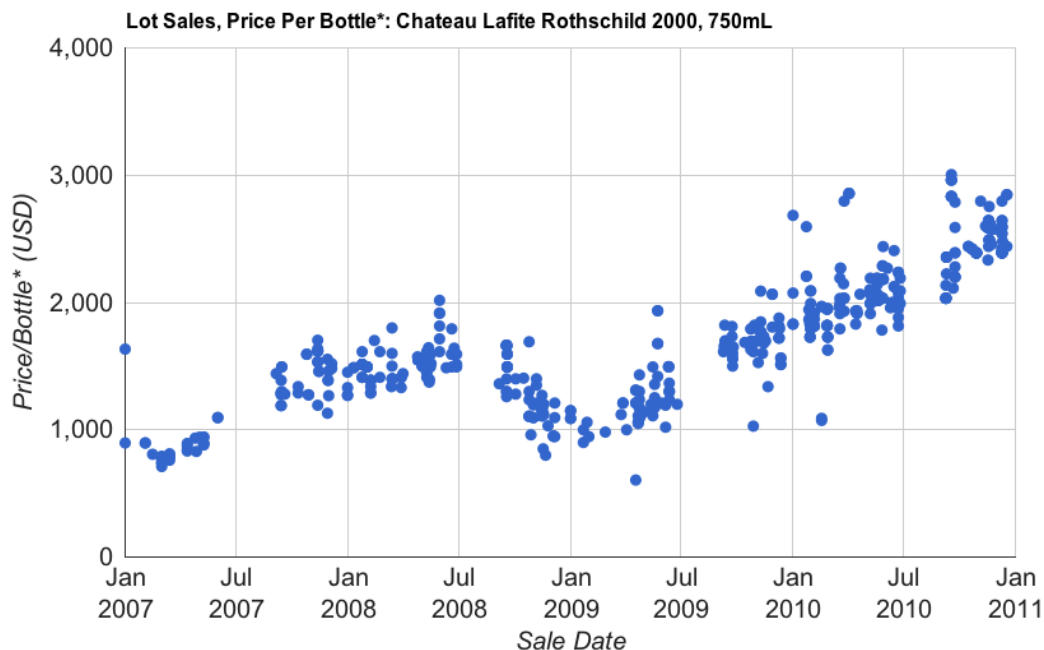
### YEAR: HIGH / LOW (LOTS)

2007: 1,703 / 711 USD (66)

2008: 2,017 / 800 USD (145)

2009: 2,089 / 605 USD (112)

2010: 3,005 / 1,073 USD (212)



## LOT SALES—YEARLY AVERAGES

(PRICE/BOTTLE\* USD, 535 RECORDS)

\* Converted to USD using the sale date's ECB spot rate.

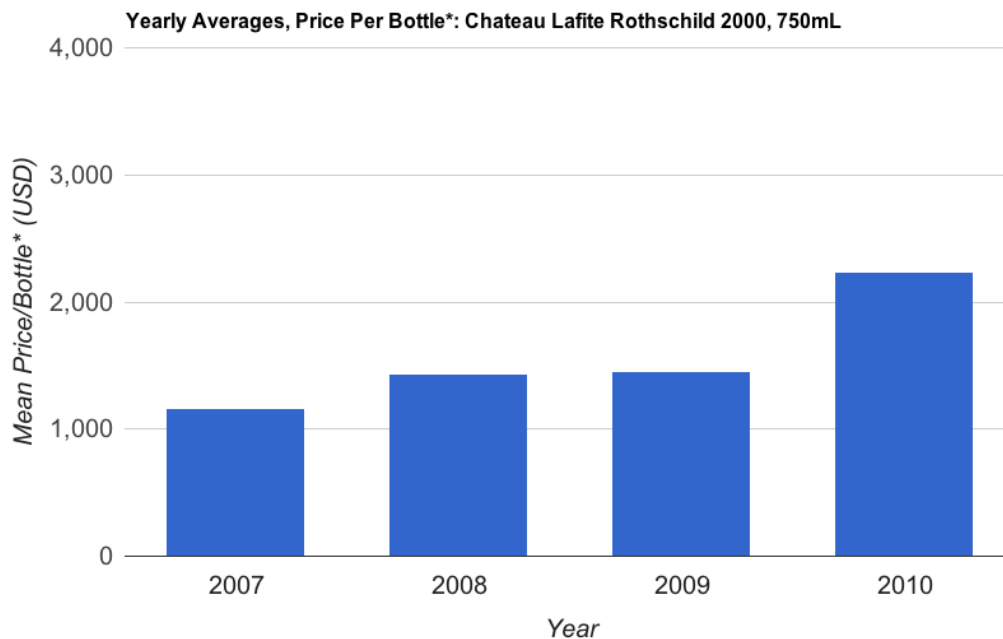
### YEAR: AVERAGE (LOTS)

2007: 1,166 USD (66)

2008: 1,429 USD (145)

2009: 1,456 USD (112)

2010: 2,234 USD (212)



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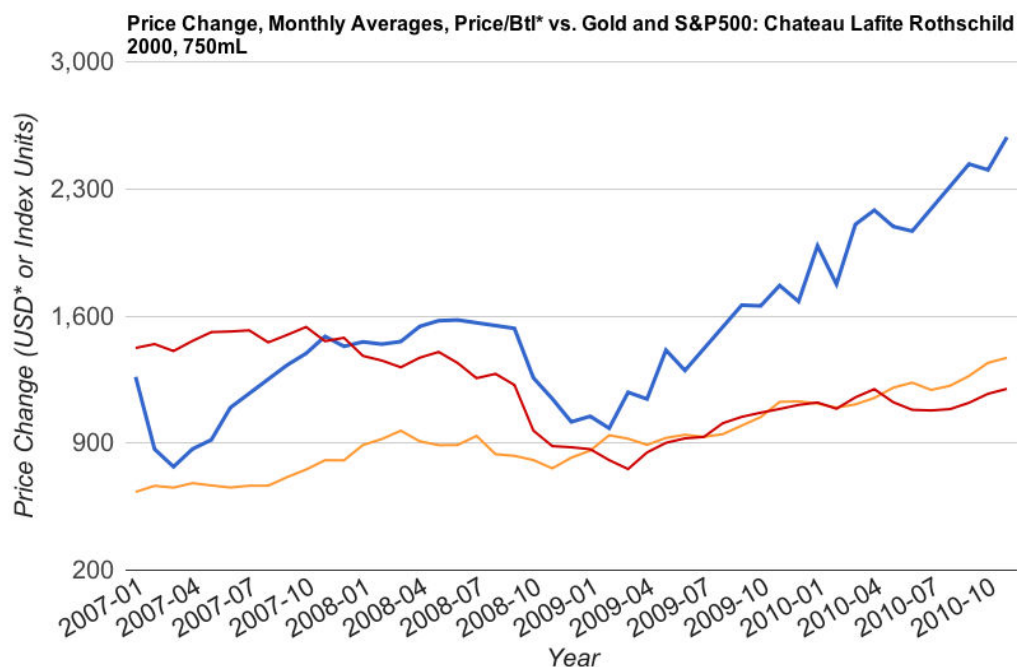
## PRICE CHANGE—MONTHLY AVERAGES

(PRICE/BOTTLE\* USD vs. GOLD PRICE AND S&P 500 INDEX)

\* Converted to USD using the sale date's ECB spot rate.

### LEGEND

- Wine
- Gold Price
- S&P 500 Index



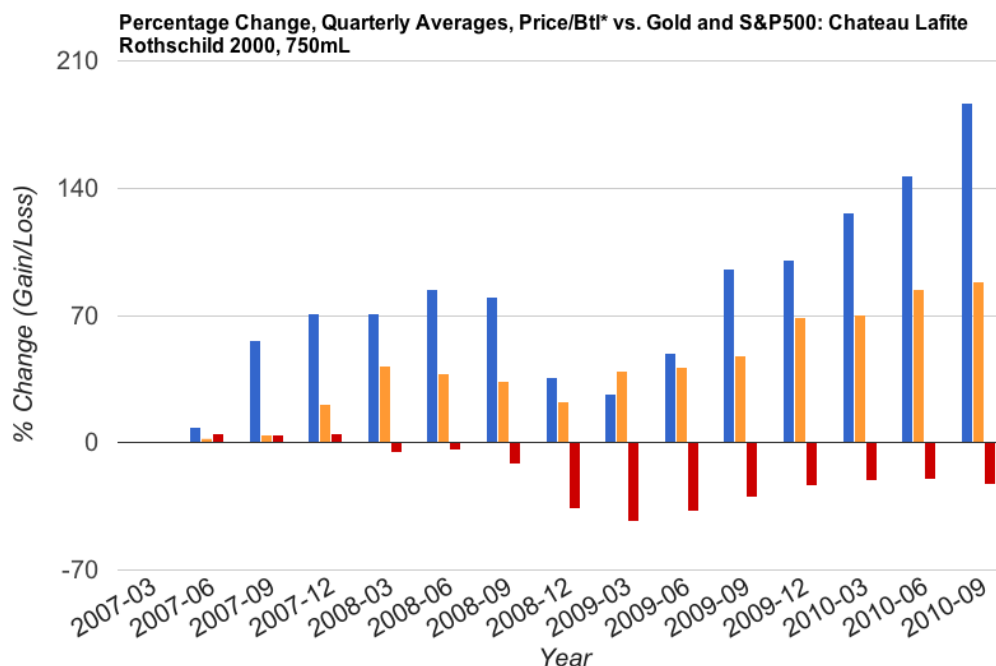
## PERCENTAGE CHANGE—QUARTERLY AVERAGES

(PRICE/BOTTLE\* USD vs. GOLD PRICE AND S&P 500 INDEX)

\* Converted to USD using the sale date's ECB spot rate.

### LEGEND

- Wine
- Gold Price
- S&P 500 Index

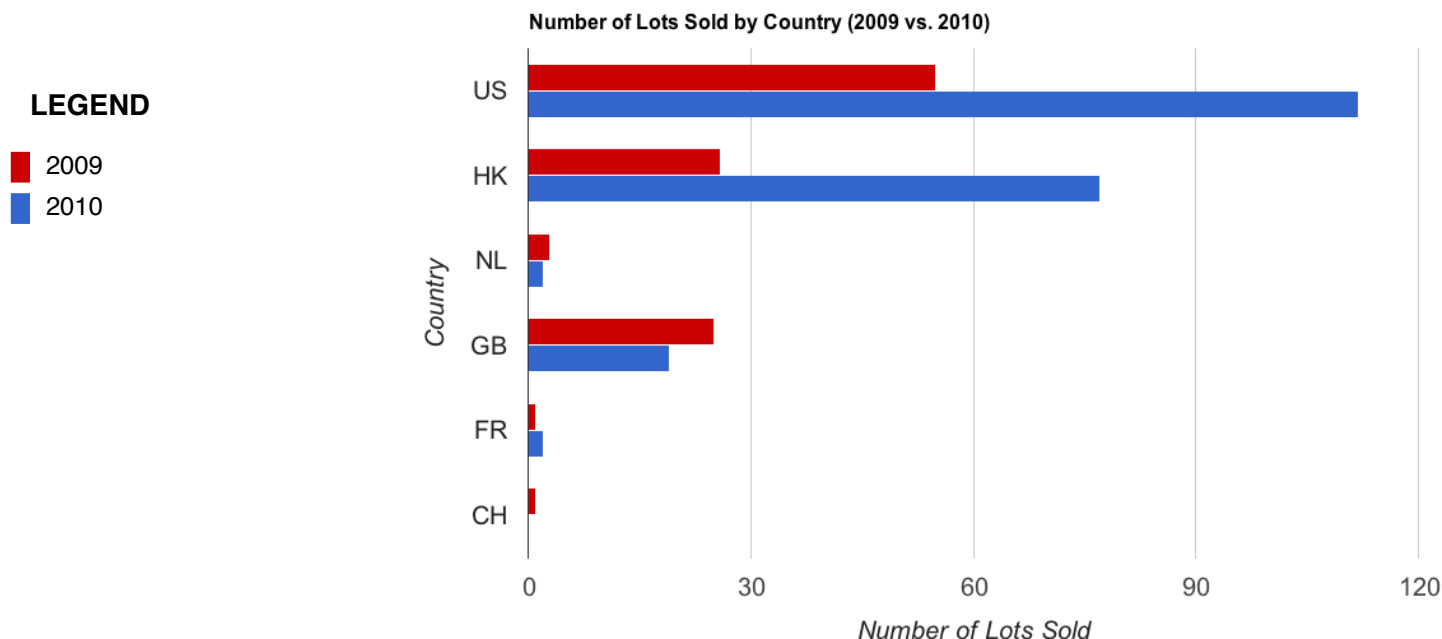


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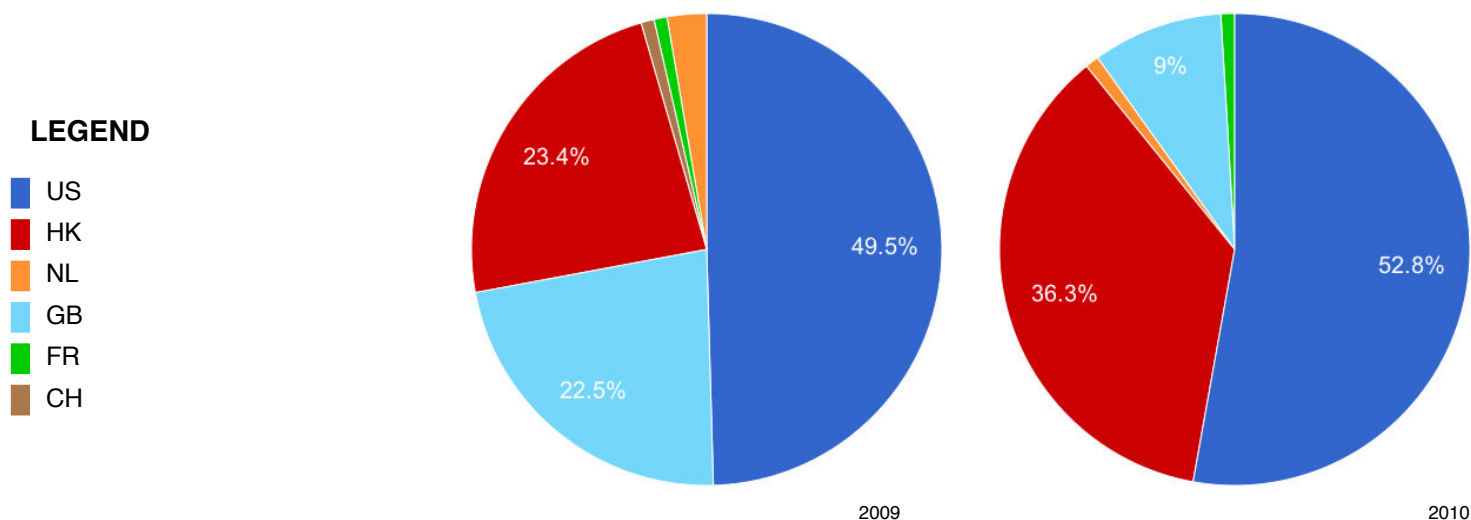
## NUMBER OF LOTS SOLD—BY COUNTRY

(2009 VS. 2010, Based on 324 samples)



## PERCENTAGE OF LOTS SOLD—BY COUNTRY

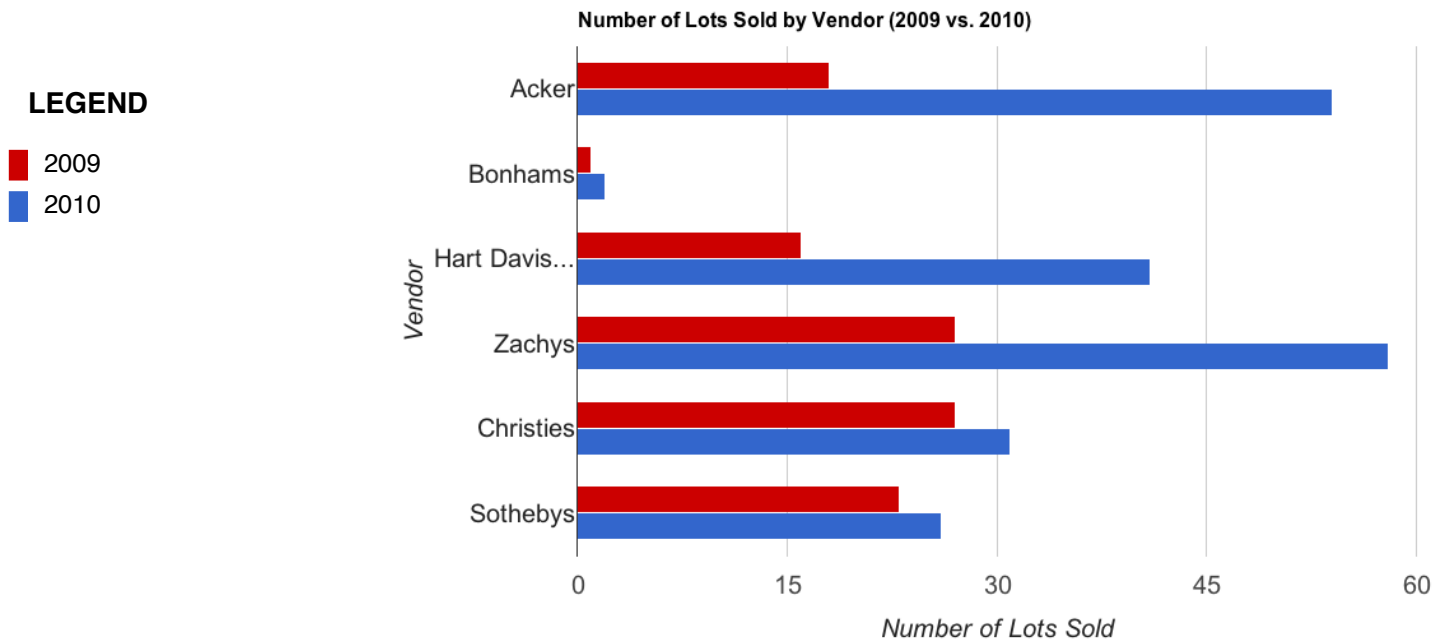
(2009 VS. 2010, Based on 324 samples)



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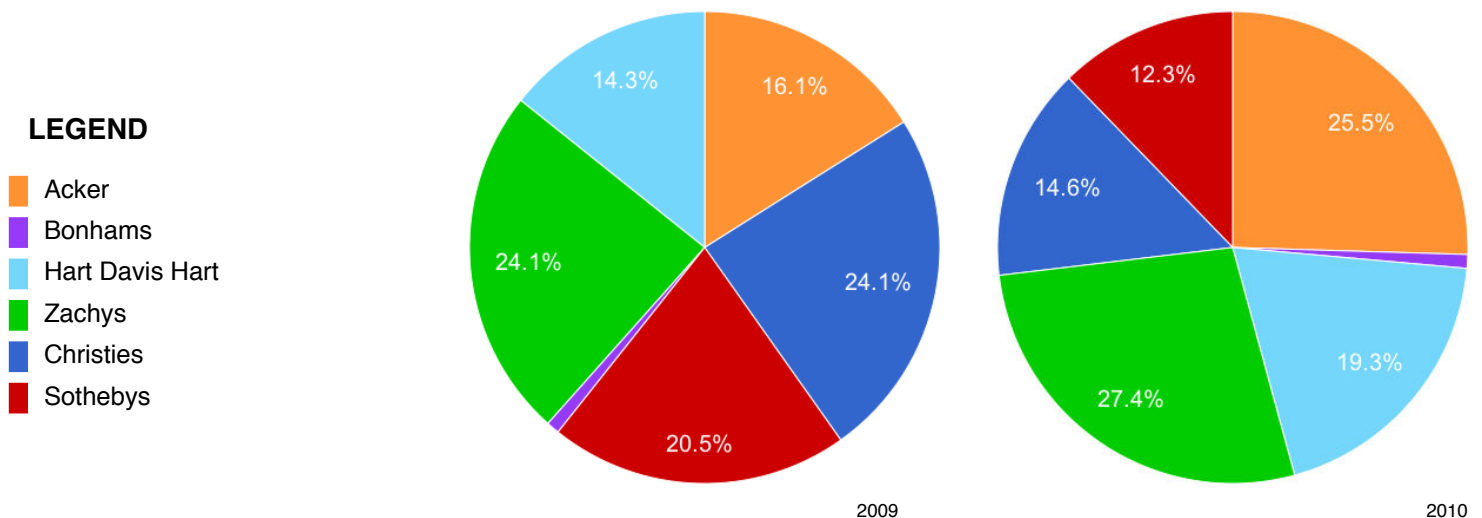
## NUMBER OF LOTS SOLD—BY VENDOR

(2009 VS. 2010, Based on 324 samples)



## PERCENTAGE OF LOTS SOLD—BY VENDOR

(2009 VS. 2010, Based on 324 samples)



## Sales Data



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## SALES DATA

535 Records | Showing the 20 most recent results

2010 High: **3,005 USD** | 2010 Low: **1,073 USD** (per 750mL of volume)

\* Converted to USD using the sale date's ECB spot rate.

| VENDOR          | CNTRY | SALE LOCATION | PRODUCT                                                                          | VOL | LOT SIZE | PRICE* | PRICE/BTL*      | CURR | SALE DATE  |
|-----------------|-------|---------------|----------------------------------------------------------------------------------|-----|----------|--------|-----------------|------|------------|
| Acker           | US    | New York      | Chateau Lafite Rothschild - Vintage 2000; Pauillac                               | 750 | 3x750mL  | 8,540  | <b>2,846.67</b> | USD  | 2010-12-18 |
| Acker           | US    | New York      | Chateau Lafite Rothschild - Vintage 2000; Pauillac; 1x12 bottle owc              | 750 | 12x750mL | 29,280 | <b>2,440.00</b> | USD  | 2010-12-18 |
| Acker           | US    | New York      | Chateau Lafite Rothschild - Vintage 2000; Pauillac; 1x6 bottle owc               | 750 | 6x750mL  | 17,080 | <b>2,846.67</b> | USD  | 2010-12-18 |
| Bonhams         | US    | New York      | Chateau Lafite Rothschild 2000, Pauillac 1er Grand Cru Classe                    | 750 | 12x750mL | 29,750 | <b>2,479.17</b> | USD  | 2010-12-11 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (11 bs)                                           | 750 | 11x750mL | 26,290 | <b>2,390.00</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (12 bs)                                           | 750 | 12x750mL | 31,070 | <b>2,589.17</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (12 bs)                                           | 750 | 12x750mL | 31,070 | <b>2,589.17</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (12 bs)                                           | 750 | 12x750mL | 28,680 | <b>2,390.00</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (12 bs)                                           | 750 | 12x750mL | 28,680 | <b>2,390.00</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (12 bs)                                           | 750 | 12x750mL | 28,680 | <b>2,390.00</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (12 bs)                                           | 750 | 12x750mL | 28,680 | <b>2,390.00</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (12 bs)                                           | 750 | 12x750mL | 28,680 | <b>2,390.00</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (12 bs)                                           | 750 | 12x750mL | 28,680 | <b>2,390.00</b> | USD  | 2010-12-10 |
| Hart Davis Hart | US    | Chicago       | 2000 Château Lafite Rothschild (8 bs)                                            | 750 | 8x750mL  | 19,120 | <b>2,390.00</b> | USD  | 2010-12-10 |
| Acker           | HK    | Hong Kong     | Chateau Lafite Rothschild - Vintage 2000; Pauillac                               | 750 | 12x750mL | 33,550 | <b>2,795.83</b> | USD  | 2010-12-10 |
| Acker           | HK    | Hong Kong     | Chateau Lafite Rothschild - Vintage 2000; Pauillac                               | 750 | 6x750mL  | 15,860 | <b>2,643.33</b> | USD  | 2010-12-10 |
| Acker           | HK    | Hong Kong     | Chateau Lafite Rothschild - Vintage 2000; Pauillac; 3 bottles different importer | 750 | 6x750mL  | 15,860 | <b>2,643.33</b> | USD  | 2010-12-10 |
| Acker           | HK    | Hong Kong     | Chateau Lafite Rothschild - Vintage 2000; Pauillac; owc                          | 750 | 12x750mL | 30,500 | <b>2,541.67</b> | USD  | 2010-12-10 |
| Acker           | HK    | Hong Kong     | Chateau Lafite Rothschild - Vintage 2000; Pauillac; owc                          | 750 | 12x750mL | 30,500 | <b>2,541.67</b> | USD  | 2010-12-10 |
| Zachys          | US    | New York      | Chateau Lafite Rothschild 2000                                                   | 750 | 4x750mL  | 9,680  | <b>2,420.00</b> | USD  | 2010-12-10 |
| Zachys          | US    | New York      | Chateau Lafite Rothschild 2000                                                   | 750 | 12x750mL | 29,040 | <b>2,420.00</b> | USD  | 2010-12-10 |



## Reviews



**danhertz.com**

## REVIEWS

### **International Wine Cellar, Stephen Tanzer, 2003-05 / 96 points**

"Full medium ruby. Flamboyantly perfumed aromas of cassis, graphite and tobacco, lifted by a floral nuance and stony minerality. Very young and precise but not austere or forbidding. A remarkably rich, silky, seamless Lafite with superb vibrancy for the vintage. Tannins are noble and the aristocratic finishing flavors go on and on. I tasted this from a 375 ml. bottle, but from all reports this wine is equally approachable right now from a standard bottle. Has more sheer density than the beautiful 2001 and may well soon shut down in the bottle."

### **Wine Advocate, Robert Parker, 2003-04 / 100 points**

"...The 2000 Lafite Rothschild, a blend of 93.3% Cabernet Sauvignon and 6.7% Merlot (only 36% of the crop made the grade) has an opaque ruby/purple color, followed by an extraordinary aromatic expression of liquid minerals/stones interwoven with the tell-tale graphite notes, mulberry, black currants, caramel, and tobacco. In the mouth, it is remarkably light on its feet, but somehow seems to pack intense flavors into layer upon layer of fruit and richness that cascade over the palate. A compelling wine, with extraordinary precision, great intensity, and a seamlessness in spite of what are obviously elevated levels of tannin, this wine was provocatively open and beautiful when tasted in January and February, but I am sure it will soon close down. The finish lasted a whopping 72 seconds! This is utterly fascinating stuff. Anticipated maturity: 2011-2050."

### **Wine Spectator, James Suckling, 2003-01 / 100 points**

"...This is the best young Lafite I have tasted. A triumph. Subtle aromas of currants, leather, tobacco and cedar. Classic cigar box nose, with fruit. Full-bodied, with an amazing texture of silky, ripe tannins. This wine completely coats your palate, but caresses it at the same time. This is the best young Lafite ever made. A triumph. Best after 2012. 18,000 cases made."



**danhertz.com**

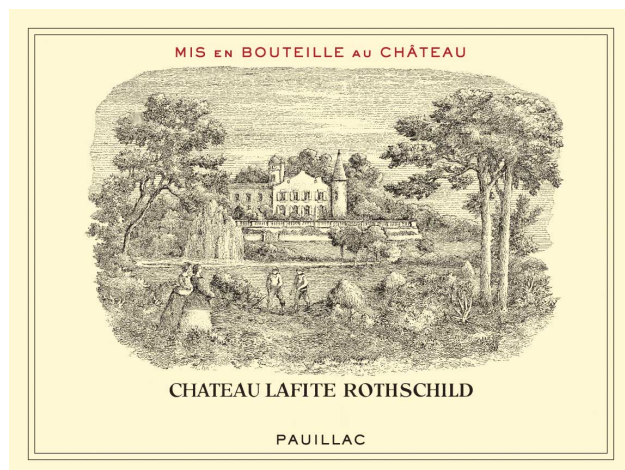
## Images



**danhertz.com**

## IMAGES

(Image source: Domaines Barons de Rothschild Technical Sheet (generic bottle shown), Image credit: lafite.com)



**danhertz.com**



# **Email Design**

for SLM, Inc.

(Adobe Fireworks, Illustrator, Photoshop and Acrobat,  
Microsoft Visual SourceSafe)

Generated over \$215,000 in new revenue.



"Wow, what a great tool for my school visits!"

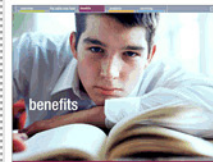
Sonya Coleman  
HigherEd Sales, Central Region  
Sallie Mae, Inc.



#### Read Testimonials

- [Jane Smith](#)
- [Dave Jones](#)
- [Max Factor](#)
- [Debra Haines](#)

#### Download Demo



To be completely honest, I have always felt like a bag lady—constantly loaded down with my laptop, peripherals, cords and brochures when going into meetings. I was running out of creative ways to dismiss my internal feeling of overwhelming clients with all of the items I was carrying through the door. It's very important to me that I convey a professional appearance, communication style and get Sallie Mae's message delivered.

With iTour, I don't have to carry everything in like before! iTour is a tool that many clients would expect the industry leader to make available to its sales force as a way to exhibit its product set. I no longer look or feel like a bag lady; I make presentations with greater confidence and have conversations with decision-makers. I already enjoy this tool and encourage anyone with this product to load it to their hard drives and start using it during their next meetings.

Before I had iTour, I scheduled client meetings to discuss a specific product or solution. Once I returned from the meeting, I would spend time sending out information on other products that came up during the meeting, making follow-up phone calls and sending emails. With iTour, I can now navigate directly to a product area and continue discussions without having to follow-up after the visit. My school clients appreciate the immediate response to their interests and I save a ton of time by not having to run around after the meeting sending additional materials.

Sonya Coleman  
HigherEd Sales, Central Region  
Sallie Mae, Inc.

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[Terms of Use](#)

Product: iTour E-mail  
Client: Sallie Mae  
Date: 2003



**25 WINNERS**  
*had their entire loans*  
**PAID OFF!**

**Are you next?**

The Great Sallie Mae  
Giveaway

20 Sallie Mae  
STUDENT  
Sallie Mae®  
Helping you pay your way forward

Dear %%first\_name%%:

**Here's your chance to pay off your student loans—FAST!**

[Enter the Great Sallie Mae Giveaway today](#) and you could win up to \$25,000!

**How does it work?**

We randomly select an entry once a month from our customers that have registered online. Winners get up to \$25,000 of their Sallie Mae loans paid off. Imagine that—just register online and it's like erasing your debt!

**Who wins, really? You do!**

We've given away \$489,096.19—that's almost half a million dollars—since 2001. In fact, 25 winners were able to pay off their loans completely!

**It's easy to enter!**

Since we draw one winner every month, you have at least 12 chances to win. But there are lots of other great ways to get additional entries! Here's how:

- Allow us to send you emails (from us and our affiliates)
- Permit us to electronically service your loan (that means no more coupon books)
- Sign up for Direct Repay, which allows us to direct debit your loan payment from your checking or savings account
- Pay online

Remember, with Sallie Mae there are no additional fees for online payments!

**How do I sign up?**

If you don't have an account yet, click on "sign up now." If you already have an account and need to sign up for Direct Repay or NetPay, log on to your account by clicking "already registered" and click on the "Make a Payment" tab. Click on "got questions" if you can think of anything else you need to know.

**Sign up  
now!**



**Got  
Questions?**



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Product: Great Giveaway E-mail

Client: Sallie Mae

Date: 2003

# **Responsive Web Design**

Solr back-end as a No-SQL database. Apache Cocoon handles front-end requests via Nginx/Jetty web servers.

(Solr, Apache Cocoon, Nginx, Jetty, Java, XML/XHTML/XPath, HTML5, CSS3, JS/JQuery, Bootstrap, Adobe Fireworks and Photoshop)



RESULTS FOR:  
Planeta Grecanico



BEST MATCH:  
Planeta Alastro Grecanico 2013

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Planeta Alastro Grecanico 2013

\$22-25 | 89pts | +756115

Style: fruity, fresh, full  
Try with: seafood, fish, grilled chicken

You may also enjoy:



Planeta Chardonnay 2014

\$25-30 | NR | +706718



Planeta Cometa 2014

\$25-30 | NR | +634253



Planeta La Segreta Bianco 2012

\$30-35 | NR | +706717



Planeta Rose 2013

\$25-30 | NR | +756117



Planeta Chardonnay 2014

\$25-30 | NR | +706718



Planeta Cometa 2014

\$25-30 | NR | +634253



Planeta La Segreta Bianco  
2012

\$30-35 | NR | +706717



Planeta Rose 2013

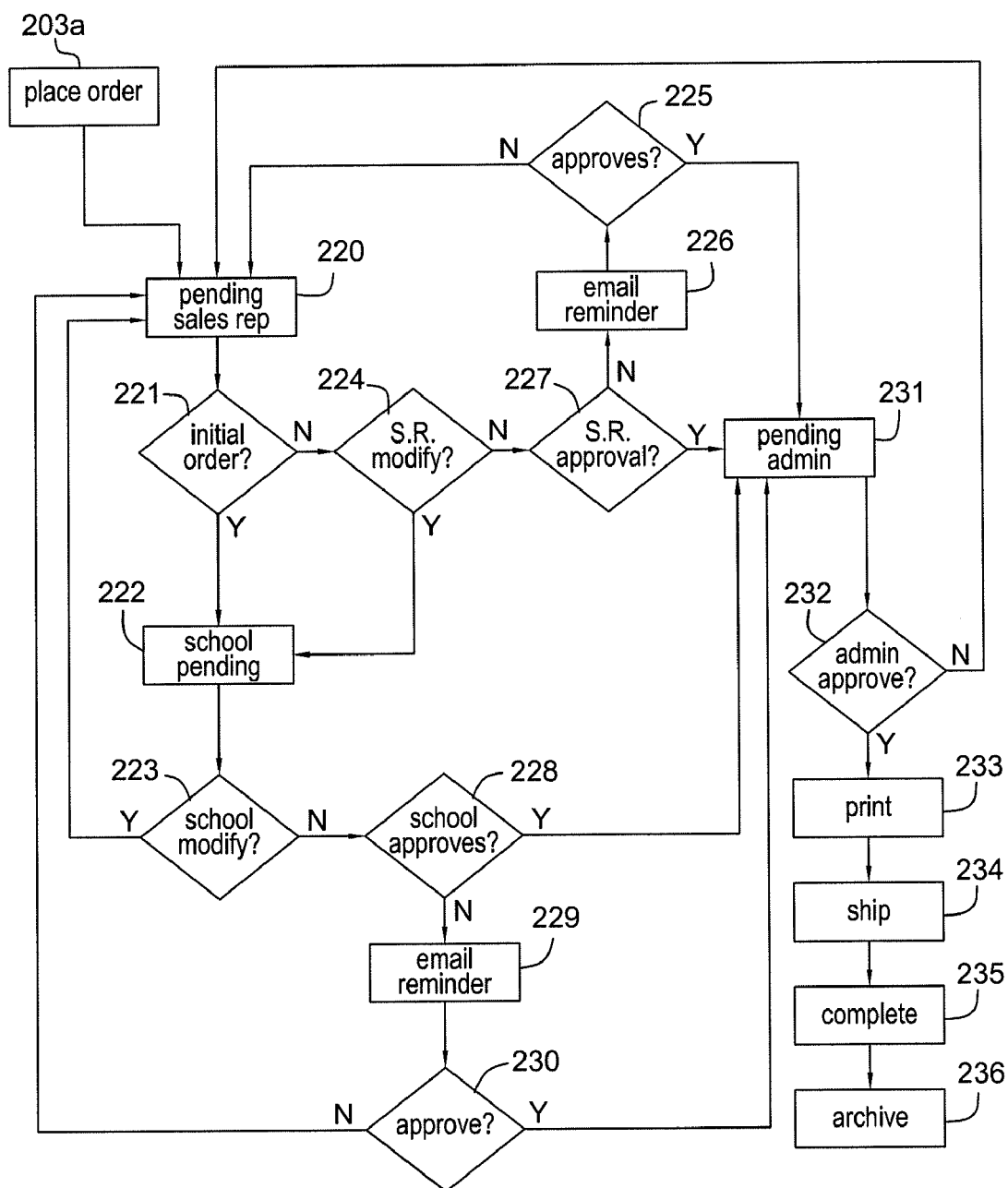
\$25-30 | NR | +756117

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# **Other Design**

Postcards, Manuals, Information Architecture, etc.

(Microsoft Word, Visio, Project and Visual SourceSafe;  
Adobe Fireworks, Illustrator, Photoshop, In Design, and  
Acrobat)

**FIG. 3**

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**SallieMae**

[cart](#) | [view saved orders\(0\)](#) | [my profile](#) | [help](#) | [sign out](#)

home

place order

order status

library

create content

Welcome to the Digital Publishing Gateway

The Digital Publishing Gateway allows you to quickly order collateral, create custom sales kits and track the delivery of your orders to your clients or events.

Welcome Eric

You have 0 [saved orders](#)

**MOST RECENT PENDING ORDERS**

| DATE | SCHOOL/EVENT | ORDER # |
|------|--------------|---------|
|------|--------------|---------|

**COMPLETED ORDERS**

| DATE | SCHOOL/EVENT | ORDER # |
|------|--------------|---------|
|------|--------------|---------|

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202

**FIG. 4B**





## APPLETON ESTATE RUM

"A first-class rum from a blend of 12 to 27-year-old oak-aged Rums. Lots of vanilla from the oak, with baked apple and allspice aromas; a smooth, creamy texture, the flavour building to a memorable end. Deserves to be drunk neat like Scotch."

~ Daniel Hertz, Grapevine  
The Calgary Sun, April 16, 1995

Product: Appleton Estate Postcard  
Client: Peter Mielzynski Agencies, Ltd.  
Date: 1997

**SallieMae**  
Education leads us.®

[www.salliemae.com](http://www.salliemae.com)

DIE SIZE: 1-3/8" x 4"  
POSITION: 7/8 from bottom  
2-1/4" from left

**SallieMae**  
Education leads us.®



Your Total  
Compensation  
and Benefits Statement

**2002**

Product: Annual HR Benefits Statement  
Client: Sallie Mae  
Date: 2002

# **Testimonials**



**REGISTRAR'S OFFICE**

MLB 117  
Telephone: (403) 220-5510  
Fax: (403) 289-1253  
Email: gkrivy@ucalgary.ca

January 3, 2001

**TO WHOM IT MAY CONCERN**

**Re: Hertz, Daniel**

I have known Daniel Hertz for 13 years in my capacity as Registrar of the University of Calgary. Daniel was working on his bachelor's degree at this University and often came to my office for advice on different procedures, etc. He received his Bachelor of Fine Arts degree with a Major in Drama in June, 1993.

In meeting Daniel, one is immediately struck by his warmth, courtesy and unimposing nature. Once you get to know Daniel, you quickly realize that your initial feelings were correct and that you are dealing with a man who is very bright, articulate and people-centred. He works very well on an independent basis though he is able to be successful in a team environment. He quickly grasps new ideas and procedures and acknowledges the assistance and help of his working colleagues. His skills with new computer systems and web sites are always appreciated.

During the last year, Daniel came to work on a full-time temporary basis with the registration section in the Registrar's Office. He walked into a difficult situation caused by previous temporary help. Within a matter of days, the permanent staff were praising our new temporary employee. He was quick to learn and wanted to learn. He was willing to ask questions of the permanent staff in order to not provide misinformation. It was clearly evident that he dealt easily with the public both by telephone and in-person. He was able to offer, in a constructive manner, suggestions for change. Daniel's success was so far-reaching that other offices on campus wanted to offer him employment given his excellent skills in dealing with students and the public.

In summary, Daniel is an excellent candidate for a position where one desires excellent people-skills, an ability to work with computer systems and web sites, an ability to learn quickly and the ability to work both independently and in a team environment. He has certainly been an asset to the Registrar's Office and the University of Calgary. There is no doubt we would always re-employ Mr. Hertz.

I would be pleased to answer any questions.

Dr. G. Krivy  
Registrar

January 19, 2005

To Whom It May Concern:

I am writing this letter on behalf of Dan Hertz. I have had the opportunity to work with Dan on several projects, mostly focused on applying new technology and developing new products to streamline existing legacy systems. These projects are specially challenging since we work in a traditional industry with established processes. Introducing new products and technology requires first and foremost, the ability to understand what exists and the ability to sell others on what can be. Dan can do that.

Dan is a passionate and creative contributor, focused on finding solutions for the business problems we bring to him. He can balance the excitement of using a new technology with the more practical needs of a business. He is very diligent about gathering and understanding requirements and making sure that stakeholder needs are met. From a technical standpoint, Dan brings an excellent understanding of user experience on the web and best practices to the table; as well as solid design and coding skills.

Please feel free to contact me should you want to discuss this recommendation in more detail.

Termeh Rassi  
Web Strategy Manager  
Sallie Mae, Inc.  
703-984-6108  
Termeh.Rassi@slma.com



Department of Finance  
Canada

Ministère des Finances  
Canada

Ottawa, Canada  
K1A 0G5

February 23, 1990

Dan,

On behalf of the GST Task Force, I would like to thank you for the excellent work you have done over the past several months preparing the "Quotable Quotes".

You have been responsible, thorough, cheerful and have always met your deadlines.

The hours you worked were demanding and we are all grateful for your efforts which helped to keep the Minister, members of his staff, members of the Task Force and the Department well informed.

I would be pleased to act as a reference should you require one at any time in the future.

All the best,

Barbara Uteck  
Director of Operations  
Goods and Services Tax  
Communication Task Force

Canada



Ministère des Finances  
Canada

Department of Finance  
Canada

Barbara Uteck

Directrice  
La taxe sur les produits et services  
Groupe de travail sur les communications

L'Esplanade Laurier, 15e étage, tour est  
140, rue O'Connor  
Ottawa, Canada K1A 0G5  
613 992-5942

Canada



Home



My Network



Jobs



Messaging



**Dan Hertz**

Multi-faceted researcher, strategist and communications professional. The idea guy. Tech, beverage and beyond. Let's work t...

Received

Given



**Carole Ekker** · 1st

Retired Legal Technology Professional

February 17, 2010, Carole was Dan's client

Dan worked on a project for me involving the transformation of a decision tree application. Working closely with me and the application stakeholders, Dan took what started out as an amateur effort and turned it into a polished, fully functional and visually attractive application. Dan is an innovative and creative problem solver, possessing a keen understanding of what works on the Web, User Interaction Design and the Customer Experience. Despite tight timelines, he delivered outstanding results. Reviews of the final application have been excellent.



**Albert Lukban** · 1st

Director of Internet Strategy at Campaign for Tobacco Free Kids

April 27, 2009, Albert managed Dan directly

Dan is an articulate and passionate advocate for the user experience. Never satisfied with cheap and easy solutions, he constantly strives for excellence and rigor in his deliverables. He fearlessly pushes the boundaries and comfort level of clients, exposing them to new possibilities, to new ways of solving problems, whether they involve branding issues, communication strategy, information architecture, or user experience.



2615 - 12th Street N.E. / Calgary, Alberta / Canada / T2E 7W9

---

December 11, 1995

To whom it may concern:

I had the pleasure of working with Dan Hertz on numerous occasions during the time he wrote wine and liquor columns for the Calgary Sun and found him always to be pleasant and thorough. He never once failed to meet a deadline.

Mr. Hertz's easy-going style and flair for entertaining readers helped him impart in his columns a wealth of first-hand knowledge about spirits without ever talking down to the uninitiated or boring the connoisseur. Throw in a modicum of self-deprecating humor and his column quickly became a winner with readers.

Mr. Hertz also displayed a keen sense of professionalism and would check all his writing to ensure the references and content were accurate.

I spent some time discussing wine and spirits with Mr. Hertz and came away impressed with his credentials and knowledge.

When dealing with Mr. Hertz, I'm sure you find this former sommelier will only provide material of champagne quality -- he's definitely no vin ordinaire.

Respectfully yours.

Ray Djuff  
Copy editor





JAMES TREZISE

*President*

KARYL HAMMOND

*Vice President*

TERESA KNAPP

*Program Director*

SUSAN SPENCE

*Director of Information Services*

April 4, 1996

Mr. Daniel Hertz  
Uncorked! The Wine & Spirit Consultants  
Suite 301 18th Ave S.W.  
Calgary, AB T2T 0G9

Dear Mr. Hertz,

It is my pleasure to take this opportunity to formally commend you for the efforts you extended on behalf of the New York wine industry and the New York Wine & Grape Foundation for the events recently held in Alberta.

Your participation and presence were critical to every step of the planning, organization and execution of these multi-faceted events and the efforts you extended contributed heavily and directly to the success we experienced at all stops of the tour. Your efforts were overshadowed only by your enthusiasm and creativity and I credit you personally with conceiving ideas which set New York apart from all the other wine fairs which are on tour through the province every year.

By creating a special atmosphere for each of our events and the special inserts for our tasting booklets, you made the guests at each event feel that they were the highlight of our tour and assisted in creating a very pleasant memory for them. To touch the consumer at this level is highly effective and to do so at maximum capacity makes the most of the tour for participating wineries and for the Foundation. I also appreciate your interest in completing the circle and providing follow-up information on the events and look forward to receiving your reports. Congratulations on completing a difficult assignment with style and flair.

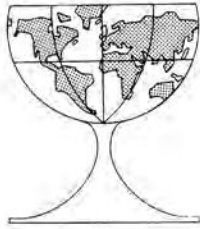
Daniel, you are obviously a young man of high integrity and creativity who grasps "the larger picture" and I look forward to working with you in the future. Please do not hesitate to contact me if I can ever be of assistance to your efforts. I would also appreciate it if you would maintain contact with the Foundation as to your activities. I have often been advised to watch for rising stars and I think that I have discovered one named Hertz.

Sincerely,

A handwritten signature in dark ink, appearing to read "Susan Spence", written in a fluid, cursive style.

Susan Spence





**FOCUS  
WINES**  
Wine & Spirit  
Merchants

566287 Ontario Ltd.

☐ Head Office:

271 Jevlan Drive, Suite #8  
Woodbridge, Ontario L4L 8A4  
Phone: (905) 851-2618  
Fax: (905) 851-8215

☐ 470 Granville Street  
Suite 418  
Vancouver, B.C.  
V6C 1V5  
Phone: (604) 682-2326  
Fax: (604) 683-0555

☒ 11520-100 Avenue  
Suite 215  
Edmonton, Alberta  
T5K 0J7  
Phone: (403) 455-6878  
Fax: (403) 455-6694

July 30, 1996

DANIEL HERTZ  
UNCORKED!  
#301, 835 - 18th Avenue S.W.  
Calgary, Alberta  
T2T 0G9

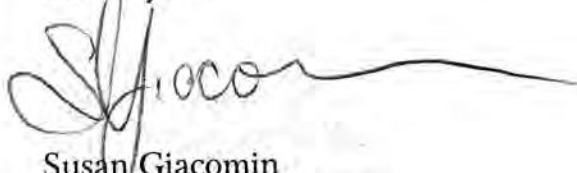
Dear Daniel:

Thank you. I am very grateful for the assistance you provided **FOCUS WINES** with. Justin, our marketing representative, appreciated your involvement. He was extremely impressed with your presentation at the *VQA Menu Launching-Staff Seminar*, at the Convention Inn South, as was the audience.

Feedback from your presentation has been incredible. I heard that "Daniel's presentation was the best and most interesting." Thank you for sharing your enthusiasm and wine-knowledge with our customers, adding value to our products. The good reputation of *Domaine de Chaberton* and *Colio* wines will be reinforced because of your introduction of their wines.

I was disappointed that I did not get to see your expertise in action. Knowing that you would be presenting allowed me to be absent without worrying that **FOCUS WINES'** reputation would be questioned.

Thank you!



Susan Giacomini  
Area Manager - Alberta

SG/rg

copy: Justin Vega

# **Dan Hertz**



## **Let's work together!**

e: [dan@danhertz.com](mailto:dan@danhertz.com)

m: +1 (707) 276-6662

[linkedin.com/in/danhertz](https://www.linkedin.com/in/danhertz)