Database Publishing & Variable Data Publishing Abstract

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A One-to-One Direct Marketing Campaign

I. Variable Data Publishing

The basis for this abstract is the consideration and fulfillment that the print customer has a need for a promotional system that can utilize a one-to-one direct marketing campaign, using Variable Data Publishing (VDP). A good contemporary VDP throughput consists of elements that work jointly to mechanize the conception of a personalized relationship these include: digital databases, dynamic design and a digital output system (mobile device, print, and web). The VDP that is outputted on a digital press or interactive media, where each printed page or mobile device is customized by the variable data, the variations will be determined by relating page content to customer information in a database. Utilizing a one-to-one marketing process, customers using VDP can identify its individual customers, differentiate among those individuals, interact with customers and records responses, and customizes communications for individual consumers.

The desired outcome is that the personalized direct mail piece or digital device should return better than average customer responses to the advertisement for the client and is designed to generate a response in the form of an order, a request for further information, or a visit to their place of business. A coupon for a discount with the customer name can be on each individual advertisement piece, this frequency marketing program can recognize and reward customers based on their purchasing behavior, also known as customer loyalty program.

These response rates in a typical marketing campaign have percentile range of recipients of accomplishment. The typical rule of thumb in the US and Europe is that a characteristic response rate is a moderate 2%, but some estimates in various industries range from a portion of a percent to 4-5% to as high as 20% or higher. The main objective of promotional VDP is to produce higher response rates. Response tracking is the recording of responses received in answer to a marketing

campaign. The tracking of these VDP mailers allows for future growth incentives and for the vision of potential growth area or revenue stream to the commercial print industry. The printer then has to make the choice of whether a new digital printer falls into the productivity workflow within their current system. While VDP technology has been around for years, the margin of profitability within the print production process needs to be justified by the companies' specific operating procedures.

The dynamic data within the advertisement might contain:

- A unique salutation to the customer with their address will greet the addressee.
- A coupon for a discount with the unique customer name will be on each individual advertisement piece.
- Previous customer interest in the product or service can be added to enhance the awareness of the marketer's products.

The expected benefits for the client are:

- Better direct marketing control
- Personalized messaging
- A return on investment (ROI) for a variable data printing campaign range from 20 to 40 percent response rates, up from only two percent from impersonal mass mailings.
- One-to-One" messaging to the customer's wants and needs
- Tracking of returning customer

II. Data

The apprehension of digital publishers is the management of digital resources. These files are the commodity of the informational structure for the printer; thus it has become crucial to be able to manage these digital resources' so that they can be archived, retrieved and reused. Data may need to be scrubbed cleaned to remove any incomplete, incorrect or corrupt data from the database. The commercial printer should have a system in place that will safe guard the information technology for the production role that they will have in the VDP process. "Decisions based upon data might be wrong. When doctors, lawyers, weather forecasters, and mechanics make decisions on poor-quality information, there is a greater risk that the conclusions are wrong. Conversely, if data is 100% reliable, conclusions are much more likely to be correct. If a decision maker was certain on having wrong data, then the decision

maker would rely on that data. However, certainty is an exclusive component in our everyday lives (C Fisher, E Lauria, S Chengalur-Smith, 2011)"

Good file management is necessary and good planning on the usability of these files need to be in place. File storage should be given careful consideration least the files become damage, unusable, lost or destroyed. A good infrastructure for the planning of these files should be considered as they are the commodity for this type of printing. This digital age printing has to be planned out carefully as we are no longer looking for type in a California Job Case but for digital files that run dynamic on storage systems. Files may have to be archived for future use if contracted as such, and a backup storage system should be considered within the printer's technology infrastructure. Choices for file storage to the printer may include storing these files onsite or storing them at a secured location that can safe guard the integrity of the digital file until needed again.

A Database Management System (DBMS) allows for software applications to create and maintain a database. This provides a level of usability and functionality between the physical data and application programs. A knowledgeable employee working on these databases has the ability to run a multitude of querying or questioning of the data, good relationships or interconnections build within the database allows for specific information to be requested. The SQL or (Structured Query Language) allows for the questioning of the database information, this can include looking for patterns that accurately predict how a customer or business may respond to a VDP. A databases can hold tables and records on people, including items such as; first name, last name, address, city, state, zip code, along with social characteristics such as, gender and age, even to the color of car they might drive or are considering purchasing. A well-focused questioning of a database can allow for a well-planned marketing program to reach the target audience. VDP creators need to focus on good data management quality. There are elements that can assist in keeping your database design clean or free from errors.

1. Keep data clean of free from inconsistencies of having duplicate information or redundant data

2. Having correct and complete information

3. Remembering decisions you will make based on the data should be well informed and focused.

III. Design Characteristics

The potential customer needs to see and sense this personalization message within the printed piece, it should bring attention to the viewer enticing them to open the VDP that arrives in their mailbox. The designer needs to develop the key ingredients

of what the important message items will be and where they will be placed; a well-crafted design layout with engaging typography incorporating images can perform this task.

It is as important to remind oneself that the design is a template for the variable data that will flow into character textboxes and image placeholders. These locations for text and images are fixed but must be well thought out and large enough to handle larger character counts for example, "Sally Smith" versus "Fredrick J Finkelsteinburger". These textboxes for first names, last names as well as personalized messages need the room for text flow. This could cause adversity for example, if the receiving customers name is not given the correct character count length thus rendering the personalized message useless. This should also be considered when creating the databases for the character counts, for example Microsoft Access allows for character amount lengths in the design view when setting up the integrity and structure of the database, the planning of this data is important in how it will look within the design template.

Graphics or images should also be considered if they are used as variable data. The file sizes for these images, .gif, .jpg, .pang, and .pdf should have the same pixel height and width to fit or scale seamlessly within the template dimensions. Images can be used to visually attract the reader to the printing material and keep their attention longer on the subject matters.

IV. VDP Framework

Below is a framework for a One-to-One (1:1) Direct Marketing Campaign for a VDP system with a ROI projection for a tree nursery who wants to increase response rate for selling nursery inventory. This scenario will offer a projected ROI to increase exposure of this new tree farm to the local community. Upon Point of Purchase (PoP) at the nursery, a database has already begun to generate data about the customer, the advertising mailers and documents will use that information to send out coupons directed to the customer. A personalized letter will be sent to the customer and offer them discounts for their next purchase. This used a system analysis design approach to the problem whereas the information was storyboarded to a flowchart and then projected out for this description.

Description of requested systems services: Primarily request: to provide a database for Tree Line Grove Nursery (TLGN) customers. This database with a user interface will be able to fill a need for Tree Line Grove Nursery by being able to track customer information for a sales and marketing for future direct mailers campaign or VDP procedures. (Figure 2)

System Design Considerations:

User Considerations

- Consider points where users interact with the system
- Anticipate future user, system, and organizational needs.

Data Considerations

- Enter data where and when it occurs
- Verify data where it is input
- Use automated data entry methods whenever possible
- Control access for data entry
- Report every instance of entry and change of data
- Enter data only once

Architecture Considerations

- Use a modular design
- Design independent modules that perform the functions needed

Output Considerations

- Use VDP application software that allows integration of data to design marketing pieces.

Introduction

This database and user interface will allow your business to: track and process your inventory, provide a unique and user-friendly system for filling orders and satisfying your customers' needs, as well as allow for data gathering and integration for future use.

Expected Benefits

The expected benefits for TLGN are:

1. Better inventory control

2. Ease of use

3. Improve tracking of customer data

4. Allows integration of data to design marketing pieces

Summary

The basis for this request is that our customer TLGN has a need for a system that can track inventory, and provide a user-friendly interface to allow direct marketing campaigns.

V. Case Scenario 1

A. The General Goals

Pontiac Press, Inc. (PPI) an innovative commercial printing company is planning on establishing a variable data print (VDP) system within the current workflow in keeping up with customer demand for fast, high-qual¬ity digital color output. We at Pontiac Press, Inc. see enormous growth potential for variable data printing services that can offer customers a sophisticated, one-to-one marketing and production experience. We also recognize the endless applications and possibilities that variable data capabilities bring to customers seek¬ing higher rate of return on investment (ROI) on their marketing spending. With a one-to-one marketing process, PPI can create direct marketing print that identifies individual customer's requests, differentiates among those individuals, interact with customers and records responses, and customizes communications for individual consumers. Our VDP outcome prediction (see Figure 2 and 3) is that a client's dynamic printed piece will return better than average customer responses in the form of an order, a request for further information, or a visit to their place of business. PPI's clients have also, expressed interest in incorporating frequency marketing programs to offer discounts to their customer with individual names printed on each individual advertisement piece, this can recognize and reward customers based on their purchasing behavior, also known as customer loyalty programs. (Adobe, 2008) We feel that we are able to meet this request with a variable data printing added to our current workflow.

Digital printing with variable data offers the autonomy to realize advertising messages in refined, high-quality style in print, with quick turnaround, short runs, and print-on-demand. With the addition of VDP, our digital production color

presses can produce thousands of documents—each with a run length of one—economically and technically efficient. We can utilize our digital presses with greater efficiency by printing customized; invitations, informational materials, brochures, annual report, catalogs, customized leaflets and posters.

B. The Target Audiences

We have had growing interest in one-to-one direct marketing commerce from our client base in education, consumer goods, automotive, medical, financial, insurance, casino gambling, and other markets. We feel that as the marketing industry continues to use direct marketing that this segment of our printing system will also grow. Another intriguing aspect combines VDP with ecommerce, while we are currently not set up for adding personalized web pages and opt-in marketing with unique URL's, we will be considering this as part of a prospecting program for the future.

C. Project Details, Constraints on Budget, and Schedule

PPI predicts that most VDP files will begin as layouts created in QuarkXPress or Adobe InDesign within our design/prepress department or files supplied by the client. Thus the document designer software we will be purchasing is Adobe Creative Suite CSX Design Standard Edition at an estimated $1,259.99, already having the appropriate licenses for the QuarkXPress in place. For additional application document design software we see the need to purchase UDirect from XMPie, to create personalized, 1:1 communications, the UDirect software expenditure is estimated at $2500.00. This software will interface with QuarkXPress, InDesign and the FileMaker Pro database software we will also be purchasing. An additional procurement will be an Atlas Software product called PrintShop Mail at $995.00, this program allows for the user to create files, import files from layout programs and then save them as PDF. The PDF file then is imported into the program where the variable data fields are then added to the document. FileMaker Pro with 10 users or seats licenses, 1 FileMaker Server X along with a 1 year of maintenance and upgrades for $2,850.00, will be purchased as well (see Figure 4 and 5). This software will allow us to create and import/export databases needed for the variable data fields that our document design application software will support. We will also ensure that out IT department will be constant with upgrades and compatibility issues with native and third party application software that we will purchase or need as we expand this operation.

Employee training has always been a huge human resource investment component at PPI. We will be sending 3 employees to update their skill sets to various educational venues. A VDP Boot Camp will be sponsored by the Printing Industries of America (PIA) in July of 2012 and additional training through Rochester Institute of Technology (RIT) in the Print Media Online Certificate Program will be required.

This training/coursework will give our employees a hands-on opportunity to familiarize themselves with the digital software and hardware, as well as the conventional systems that make up the workflows in today's imaging and printing systems.

Educational example from RIT Advanced certificate, digital print and publishing course list

1. 2081-721 Digital Print and Publishing

2. 2081-723 Contemporary Publishing

3. 2081-728 Database Publishing

4. 2081-740 Technology Practicum

5. 2080-799 Independent Study

It is anticipated that through the employee training that our three employees will be prepared to establish a VDP process to our workflow, as well as train additional staff as needed within the company. Lifelong learning will be added as needed to increase our company's knowledge base in this technology. I have also anticipated that consultants may also be brought in to assist us in the start up of this operation, this will be handled as needed, and I have added this to the budget cost under miscellaneous expenditures (see Figure 5 and 6). Also added in the miscellaneous cost is the purchasing or renting of the databases for the first 3 months necessary for the variable data if it cannot be supplied by the customer. This budgeted cost factor will also be adjusted as needed.

To analyze and determine our return on investment (ROI) specific to adding a VDP segment to the workflow, we expect the following:

1. Anticipated projection of the implement of VDP into the workflow as scheduled for the end of September 2012 (see Figure 6).

2. Sales team will begin selling VDP as a product September 2012, and prepared with the knowledge that:

a. The majority in current trends of VDP orders and deliverables are outputted at a rate of "500 to 2000" average pieces per order.

b. The majority in current trends of a VDP workflow being less than 5000 printed pieces per order.

3. Anticipated projection of educational services received by 3 employees will

begin in July 2012 and continue through 2013, continuing lifelong learning will be applied to employees as needed.

4. Anticipated projection of software installation will begin in June 2012.

5. Prepress and IT department will evaluate outputs to digital presses from June - August 2012.

6. A projected 2 years to recover the initial investment dollars in software, training and staffing.

The Specific date for completion of these milestones efforts will be targeted for the end of September 2012; we feel that our progressive shop can handle this demanding deadline as most of the major components are already in place. We currently have digital presses that will be used for the actual printing that will interface with the software as our suppliers have demonstrated in the past year. We have the work stations in the design and prepress departments that will be utilized to run the software applications and we have the necessary employees that will be initially trained to begin this venture. It is realized that our initial implementing of this will be a measured introduction to our current workflow, but we do have a goal of reaching 100% of our goal of meeting the educational requirements within 1.5 years. The final outcome, with Data Value added (Figure 7 and 8) of this Frequency Marketing project is a fully established Variable Data Production by the February 2013, it is projected by that time we will be able to meet and exceed our customers' demands of direct marketing production with our digital presses.

Once the data has been created and saved (Figure 9 and 10) saved to VDP file format the file can be RIPed to the digital press. A raster image processor (RIP) is hardware or software device that can convert vector graphics, type and bitmapped images into one high-resolution raster image. The RIP allows for the interpretation of the page, using a page description language (PDL), when the information from application program is brought in. Almost, every manufacturer had its own PDL and a RIP set up to handle this, digitally RIPed information from computers then can be transformed into analog information on paper, film or plate.

VI. Case Scenario 2

Rochester Institute of Technology uses carefully planned out marketing campaigns with good design theory. RIT's printed material includes; a well-balanced layout, the college's themed colors of orange & black, strong visuals, and pleasing typography placement. These individualized mailers are sent to alumni for donations to enrich their departments. Inside the mailer are an assortment of items that have included; a personalized letter to the individual, a flip card with the individuals name stenciled on the back of the mascot's jersey to allow the recipient to be a part of the team, a

personalized donation card and a window decal. A die cut in the mailing envelope allows for the recipient to see inside to the richly engaging items with a personalized message displayed. These items (Figure 13) persuade the addressee to open the mail and to see themselves in a new light; they are personally included in the marketing process, so they read further into the marketing campaign. This makes the mail unique and difficult to discard to the circular file, as the addressee will be tossing something personal away. The objective is to have the viewer not only spend more time contemplating what they are being requested to do but to linger and give more thought to the mailer with the hopes of engaging the recipient into a response.

VII. Conclusion

The basis for this one-to-one direct marketing campaign is for client using Variable Data Publishing to be able to treat their customer as if it is all about them for their wants and needs in advertising. These campaign communications as shown in the case scenario 1 and 2 can be made using various methods of print media and or additionally supported with interactive media for web & mobile devices such as Adobes portable document file or .pdf. This data is value added when exported from an application database management system and imported into a graphic design application, where it is used in the direct market static advertisement. The printing industry is ever changing and it is important to realize that these paradigm shifts will offer a new revenue stream for the production of print. The printing industry should continue to support research in technology along with education and be prepared to make and allow for this growth.

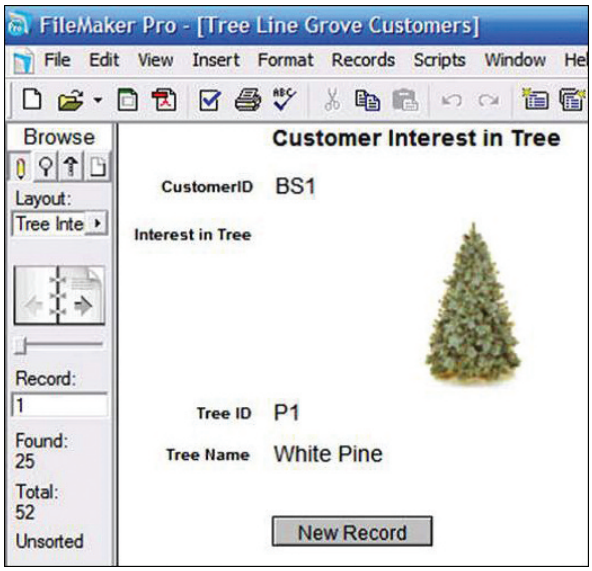

Figure 1. *Previous customer information was retrieved from the database*

VDP Complete® Results	
Your input	
Average revenue per response	$20.00
Mail pieces per mailing cycle	5,000
Number of mailing cycles	10
Expected average response rate	20.00%
Campaign summary	
Total pieces	50,000
Cost per piece	$1.28
Break even responses	3,200
Break even net response rate	6.40%
Cost per mailing cycle	$6,400.00
Estimated results	
Responses	10,000
Gross revenue	$200,000.00
Return on Investment (ROI)	212.50%
Cost per response	$6.40

Figure 2. *Estimate probability of using VDP per order*

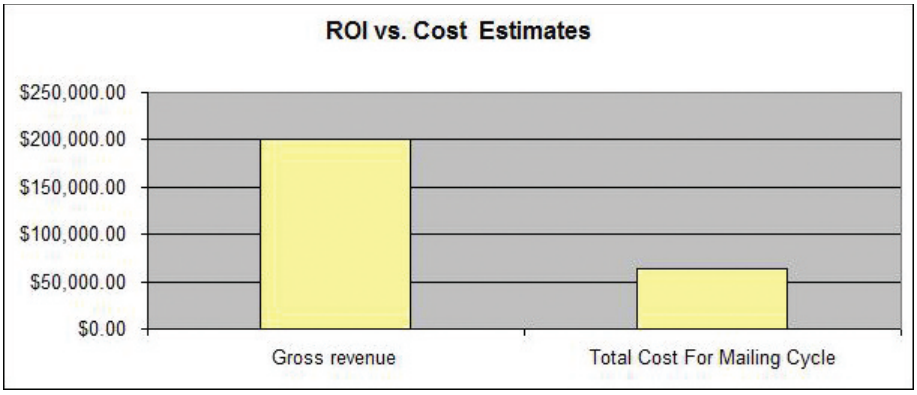

Figure 3: *Estimate of probability of using VDP per order*

Expenditures	
Educational	
PIA	895
RIT	12800
Education Total for 3 Employees	$ 41,085.00
Software	
XMPie	2500
PrintShop Mail	995
FileMaker Pro Bundle	2850
Adobe CSX	1260
Software Total	$ 7,604.99
Software Total for 3 Stations	$ 22,814.97
Miscellaneous	$ 8,000.00
Sum Total	$ 71,899.97

Figure 4: *Expenditures for educational, software and miscellaneous costs*

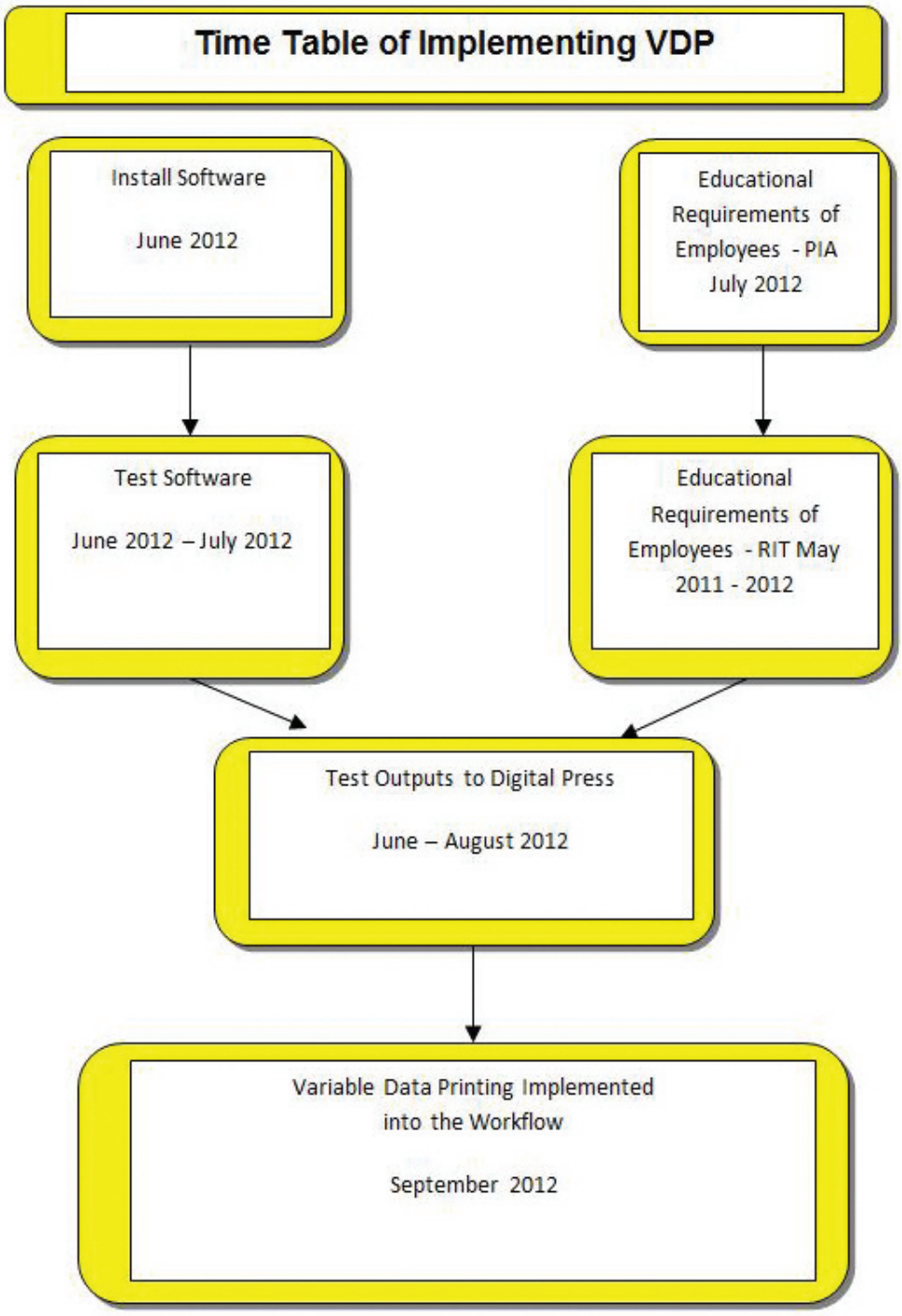

Figure 5: *Estimate of Time Table of Implementing VDP*

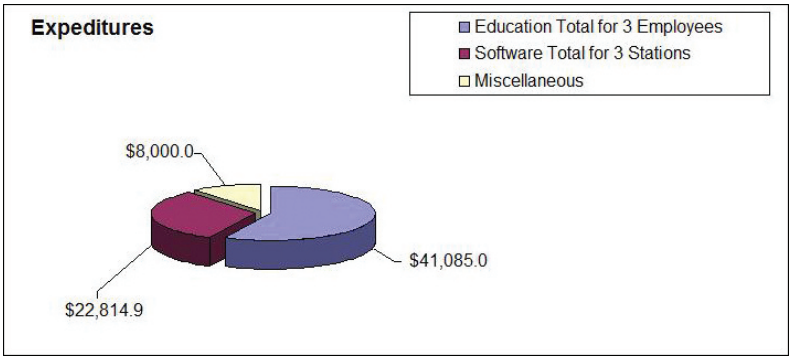

Figure 6: *Expenditures for educational, software and miscellaneous costs chart*

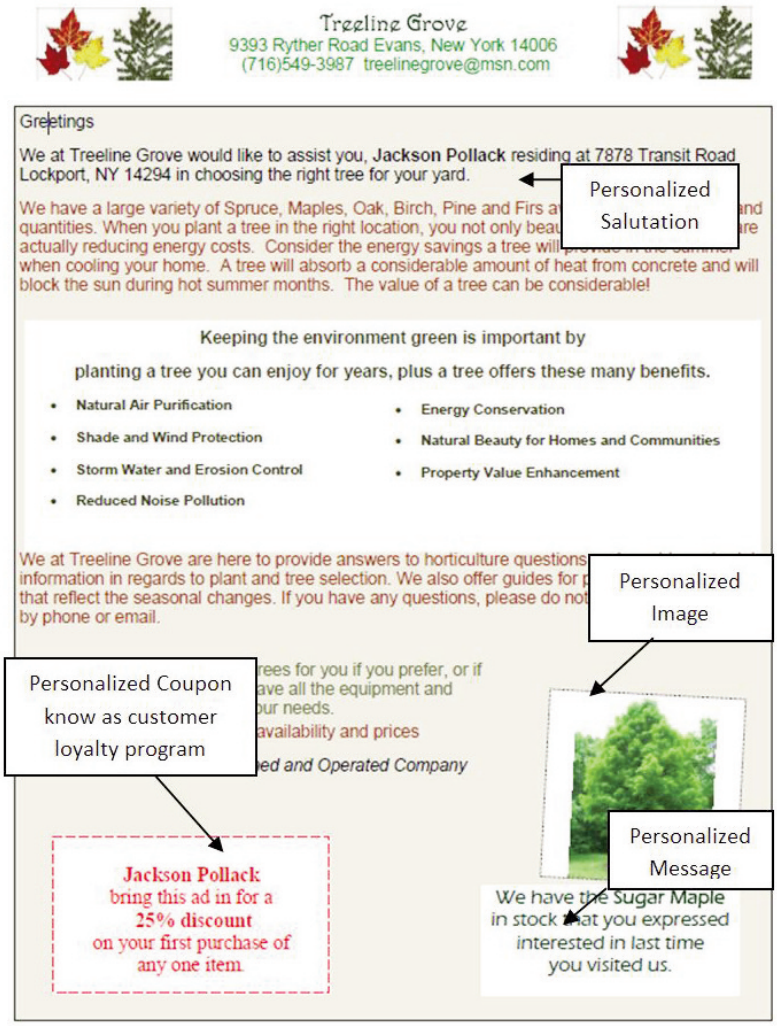

Figure 7: *How Data Value is added -Frequency Marketing program Changes per Customer*

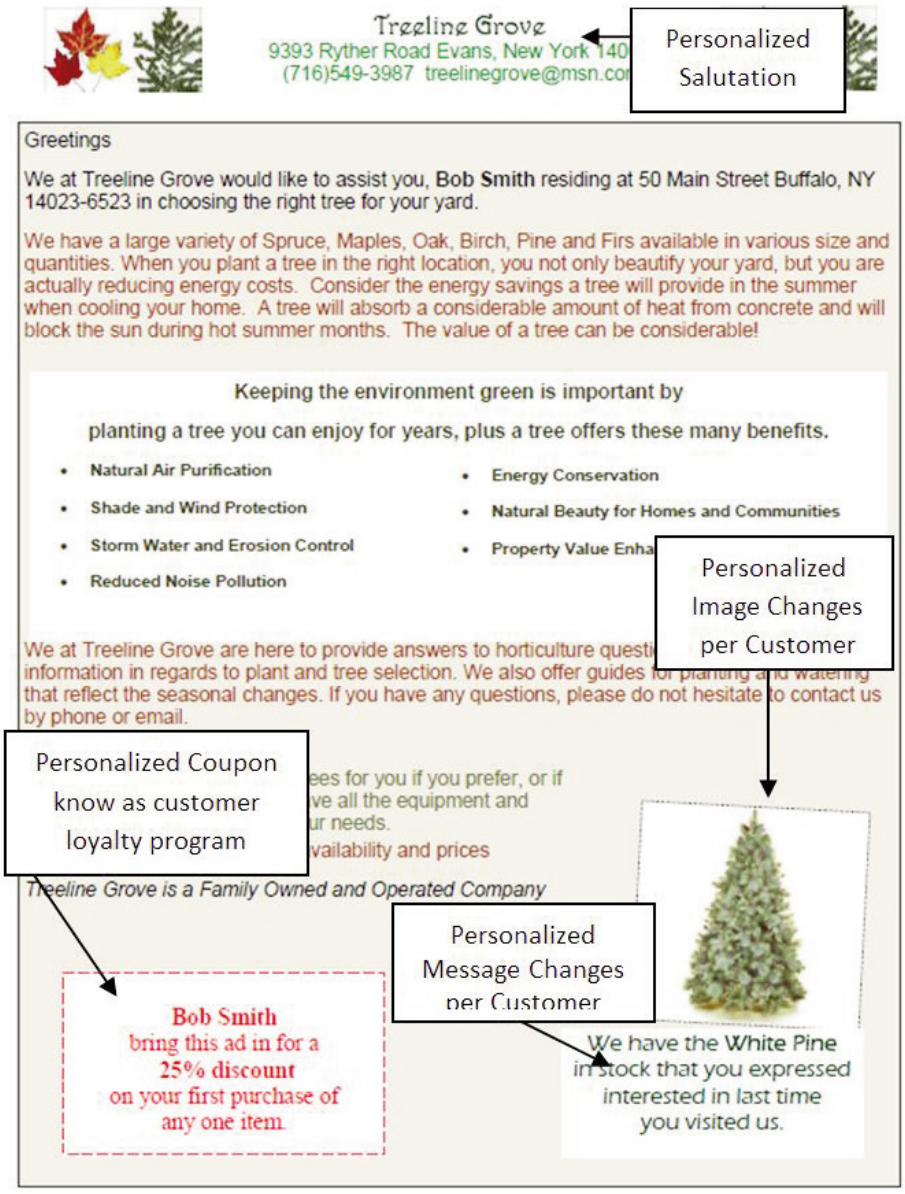

Figure 8: *How Data Value is added -Frequency Marketing program allows for changes per customer*

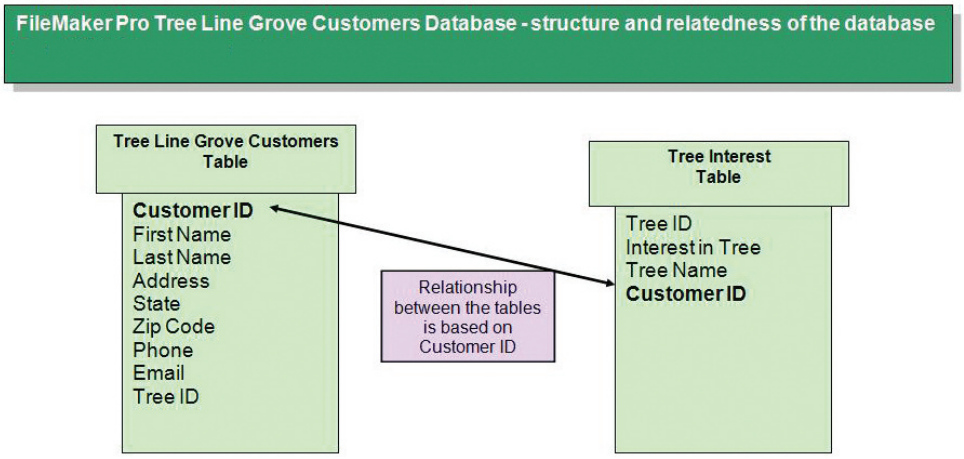

Figure 9: *Relationship Unique Identifier within a Database Management System (DBMS)*

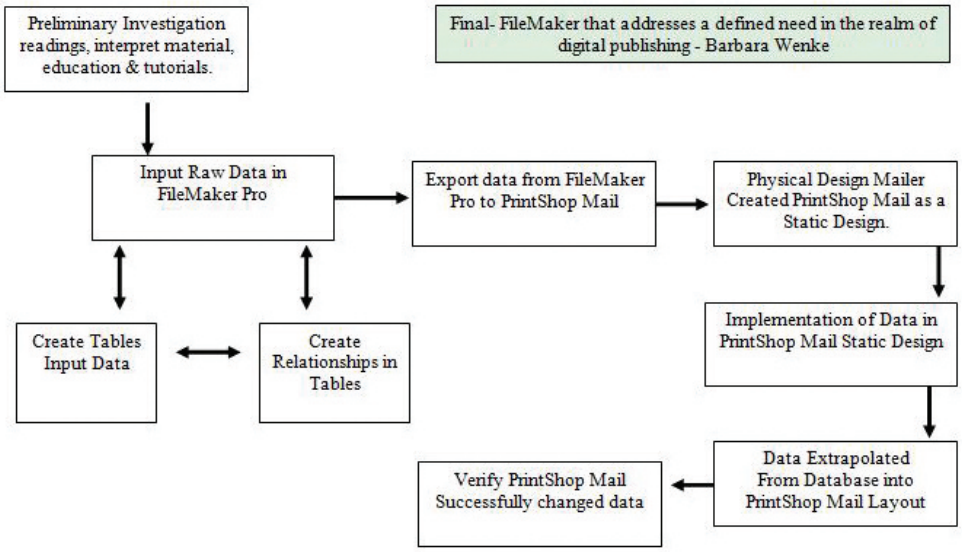

Figure 10: *Flow Chart of the VDP process*

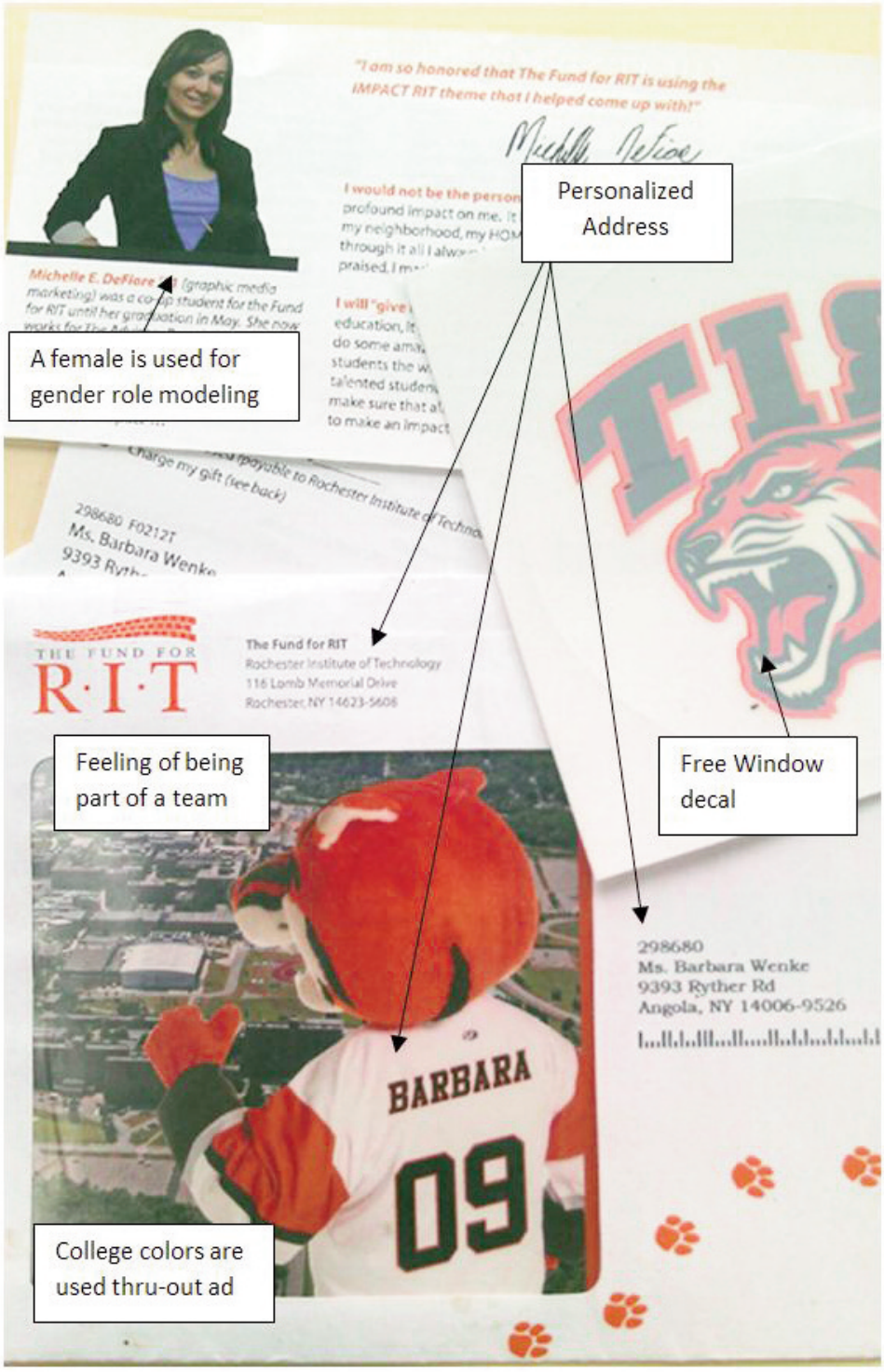

Figure 11: *RIT VDP examples*

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