PROPOSAL

SETH CHASE

- Virtual Port
- PDF Conversion and Modification
- Cloud & Local Print

SOW#: 201310SCPRINT

CLIENT:	SETH CHASE
CONTACT:	
ORIGNAL DATE:	11-OCT-2013
PREPARED BY:	DOUGLAS ANDERSON
REVISION:	ORIGINAL
REVISION DATE:	
REVISED BY:	

BACKGROUND & SUMMARY

NOTE: This is a preliminary SOW. It lacks a lot of detail, technical and otherwise. Where the document and/or process is not clear or ambiguous, Ballistic Echo reserves the right to refine, revisit, and potentially adjust pricing as required.

Seth Chase approached Ballistic Echo with a unique requirement to allow end-users the ability to essentially print documents to both a local printer as well as a webserver, while embedding/overlaying a barcode and/or logo onto the document.

USE CASE

An end-user prints a document. They select the SC Printer.

Assuming this is the first time they have printed to the SC Printer a modal window will appear asking them to select from any of the Windows printers on their system. Here they will select their local printer they want the final document to print to. Once set they will not be prompted again; however, this window will also describe how to change this default setting in the future.
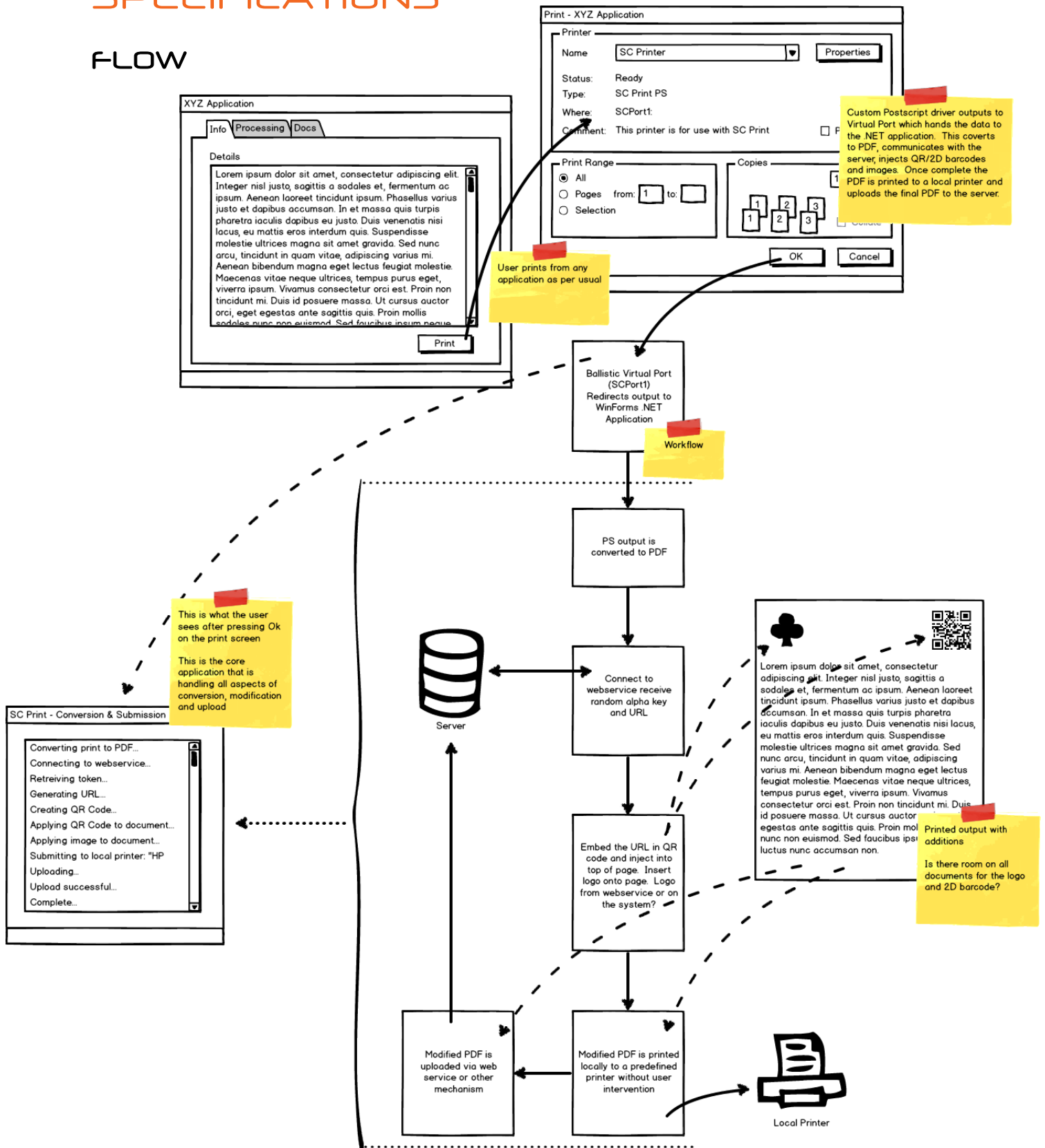
Next a window will appear showing status and the document conversion / upload process. To the user they will simply see a progress bar and some status messages showing items such as:

- Converting to PDF
- Connecting to Web service
- Inserting QR Code
- Printing locally
- Uploading

In the end, a copy of the output on their local printer (without intervention) and a copy will be sent to the external servers. If need, we can prompt the user to click 'ok' to confirm that the document printed properly local and if not they can select a different printer to submit it to.

SPECIFICATIONS

FLOW

XYZ Application

Info | Processing | Docs

Details

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nisl justo, sagittis a sodales et, fermentum ac ipsum. Aenean laoreet tincidunt ipsum. Phasellus varius justo et dapibus accumsan. In et massa quis turpis pharetra iaculis dapibus eu justo. Duis venenatis nisi lacus, eu mattis eros interdum quis. Suspendisse molestie ultrices magna sit amet gravida. Sed nunc arcu, tincidunt in quam vitae, adipiscing varius mi. Aenean bibendum magna eget lectus feugiat molestie. Maecenas vitae neque ultrices, tempus purus eget, viverra ipsum. Vivamus consectetur orci est. Proin non tincidunt mi. Duis id posuere massa. Ut cursus auctor orci, eget egestas ante sagittis quis. Proin mollis sodales nunc non euismod. Sed faucibus ipsum neque

Print

Print - XYZ Application

Printer

Name: SC Printer | Properties

Status: Ready
Type: SC Print PS
Where: SCPort1:
Comment: This printer is for use with SC Print

Print Range
- ◉ All
- ○ Pages from: 1 to:
- ○ Selection

Copies

1 | 2 | 3
1 | 2 | 3

☐ Collate

OK | Cancel

Custom Postscript driver outputs to Virtual Port which hands the data to the .NET application. This coverts to PDF, communicates with the server, injects QR/2D barcodes and images. Once complete the PDF is printed to a local printer and uploads the final PDF to the server.

User prints from any application as per usual

Ballistic Virtual Port (SCPort1) Redirects output to WinForms .NET Application

Workflow

PS output is converted to PDF

This is what the user sees after pressing Ok on the print screen

This is the core application that is handling all aspects of conversion, modification and upload

SC Print - Conversion & Submission

Converting print to PDF...
Connecting to webservice...
Retreiving token...
Generating URL....
Creating QR Code...
Applying QR Code to document...
Applying image to document...
Submitting to local printer: "HP
Uploading...
Upload successful...
Complete...

Server

Connect to webservice receive random alpha key and URL

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nisl justo, sagittis a sodales et, fermentum ac ipsum. Aenean laoreet tincidunt ipsum. Phasellus varius justo et dapibus accumsan. In et massa quis turpis pharetra iaculis dapibus eu justo. Duis venenatis nisi lacus, eu mattis eros interdum quis. Suspendisse molestie ultrices magna sit amet gravida. Sed nunc arcu, tincidunt in quam vitae, adipiscing varius mi. Aenean bibendum magna eget lectus feugiat molestie. Maecenas vitae neque ultrices, tempus purus eget, viverra ipsum. Vivamus consectetur orci est. Proin non tincidunt mi. Duis id posuere massa. Ut cursus auctor egestas ante sagittis quis. Proin mol nunc non euismod. Sed faucibus ips luctus nunc accumsan non.

Printed output with additions

Is there room on all documents for the logo and 2D barcode?

Embed the URL in QR code and inject into top of page. Insert logo onto page. Logo from webservice or on the system?

Modified PDF is uploaded via web service or other mechanism

Modified PDF is printed locally to a predefined printer without user intervention

Local Printer

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DETAILS

This project will be seen as "work in progress" with respect to much of the specification. This is due to a number of unknowns including the user base, submitting application, environments etc. The basic workflow should hold true regardless; however, there are a number questions yet to be asked and answered.

We have approached this as a set of smaller elements. All of these will be tied together and appear seamless in the end through customization of the look/feel and installation.

PRINT DRIVER

The first element is print and the print driver. Initial versions will rely solely on the print system in Windows. It will also assume that if any information is to be pulled from the document, the application submitting the print job will do this through standard Windows drivers (v3), the GDI, and that the output contains text and not simply a bitmap image.

The current thinking is that we utilize a customized Postscript print driver. This allows flexibility in conversion to other data formats.

PRINT REDIRECTION & APPLICATION LAUNCH

Once the print job is submitted, the Ballistic Echo Virtual Port (customized) will take over and launch a Windows executable against the print file. This will perform the following steps.

1. Extract metadata from the print job such as user id, machine name/IP, document name
2. Potential extraction of data from the print job
3. Creation of random alpha/numeric or GUID value (or receive from web service)
4. Conversion to PDF (on the workstation)
5. Insertion of QR/Barcode and image/logo
6. Submission of PDF to local printer for hardcopy output
7. Call web service and/or upload via ftp or similar

DETAILS:

1. EXTRACT METADATA: By default, Virtual Port allows for the extraction of these details when available.

2. EXTRACT DATA: The application can reach into the output file and extract the raw text from the print job. If this is required this will be seen as work over and above the initial scope of work.

3. RANDOM VALUE GENERATION: We are unclear on the specifics or requirement for this but can easily generate a random value. A GUID similar should ensure no overlap. Generation on the server could also be performed using a simple web service that asked for a new value and one, along with other metadata is provided.

4. CONVERT TO PDF: The output will now be converted to PDF, this is done on the workstation to minimize server resources but also to ensure that a final copy of the document can be printed with ease to a locally attached printer.

5. INSERTION OF QR/BARCODE: It is our understanding that the value from 3 will be used to generate a URL or similar value that will be stored in the QR/Barcode. Once the barcode is generated, we will superimpose on the document in a pre-defined location. Another graphics

element such as a logo can be added at this time. Where this logo is stored and/or retrieved is up for discussion.

6. PRINT PDF: The final PDF (or the document before barcode/logo insertion) will be printed to a local printer so that the user has a hard copy. This printer can be set by the user but the intent would be that there is little or no intervention and that it simply prints to the pre-defined device. If there is a problem such as the printer has been uninstalled or similar, we will prompt them to select another device.

7. UPLOAD: The final PDF will now be uploaded to the server. This may be a web service type call, sFTP/FTPs or other transmission.

SCOPE

SERVER SIDE (out of scope):

One thing that has not been discussed is the server side development. Is Ballistic Echo handling this? We have estimated a cost for this and will quote separately if need. For now, we are assuming that the current project is the print, insert, and upload aspects. The web services for random value generation and distribution as well as the upload component are assumed to be in place and we will simply connect to them.

CLIENT SIDE:

All aspects revolving around the print driver, virtual port redirection, and the application to process the document in the ways mentioned are included.

INSTALLER:

A comprehensive Windows-based installer will be provided to ensure seamless and simple install of the components.

BRANDING:

The solution will be branded in a way that reflects your wants and wishes including installer logos and corporate naming. There may be registry and other configuration values that still reflect Ballistic Echo. In simple terms, we will see you as the 'publisher' and ourselves as the 'developer'.

OPERATING SYSTEMS, ARCHITECTURE & REQUIREMENTS:

The solution in question will be designed for and function on Windows XP, Vista, 7 and should function on Window 8 but development and testing on Windows 8 will be done after the initial development, testing, and deployment at no additional charge.

The solution will function in 32 and 64 bit versions of the operating systems mentioned.

All requirements including VC++ libraries and .NET will be detected and if not installed will install as part of the installer package.

PRICING

This pricing is based on initial discussions and emails. As more discussion and details arise this pricing may change.

All pricing is in USD and does not include any applicable taxes or shipping costs.

Item	Qty	Price	Extended
Initial Development – to Beta∗			∗∗$6,000.00
- As per the details outlined in this document			
- At the end of this stage a completed solution can be installed at an end-user test location			
- May still need minor branding updates			
- This version can be installed on a maximum of 5 end-user workstations and will not be considered complete or ready for mass deployment			
- Will include the initial 50 licenses			
Ongoing Licensing / Support & Development∗∗∗	1	$10.00	$10.00
- For ongoing support and updates			
- Annual per install (paid annually in advance)			
- Could negotiate an all in annual maintenance fee to reduce the need to track installation quantities and/or volume discounts.			
		TOTAL:	**N/A**

∗50% of this will be paid up front and 50% at the completion of the Beta. Beta criteria will be determined just before the project start.

∗∗This value could be decreased with an increase in licensing cost.

∗∗∗This is based on the assumptions of volume and will include bug fixes, updates due to changes to operating systems (eg: Window 8,9,10). It will also include minor changes to the software to improve user experience and/or functionality.

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LICENSING & SOURCE CODE

LICENSING

Ballistic Echo will retain rights to the solution but through the pricing and support model described, will allow Seth Chase to deploy as he see fit. In essence, a multi-enterprise licensing model with ongoing support and maintenance charges to handle those aspects.

Any 3rd party libraries will be royalty free to ensure the solution can deployed without fear of additional costs. Over time, those libraries may require updating, at that time any additional costs can be discussed.

SOURCE CODE AND RIGHTS

In addition, Ballistic Echo will offer the opportunity for Seth Chase to purchase the rights and source code for Virtual Port and all other Ballistic Echo owned components outlined in this document which are required for the overall solution. Pricing and details will be discussed at a later date.

SUPPORT & MAINTENANCE

There are two distinct aspects of support.

1. End-user / 1st level: This support will be handled by Seth Chase and is the initial support given to end users who reach out to his organization. All aspects of the application will reference this for branding and support purposes.

2. Through problem determination, if it is deemed there to be an issue with Virtual Port or the application, a ticket can be created with Ballistic Echo. Typically this will be a phone call to Ballistic Echo's support line or emailing support@ballisticecho.com.

REVISION NOTES

REVISION / DATE	AUTHOR	NOTES
11-OCT-2013	D.Anderson	Initial version