

U.S. Bank ePayment Solution

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Background

The University of Wisconsin-Milwaukee has contracted with U.S. Bank to provide web-based ePayment solutions. After a successful pilot launch of the UWM Foundation's online donation form, a second instance of U.S. Bank's ePayment technology was created for general campus use. The first client to use the general ePayment instance was the UWM Alumni Association for online registration for their Panther Prowl run/walk.

The creation of the second, general ePayment instance allowed for the opportunity to become more familiar with U.S. Bank's setup process. After a few minor glitches, this setup was much smoother than the initial setup of the Foundation's pilot project, taking only two weeks from setup to launch. Now that the general ePayment instance has been created and configured, it can be available for use by any school, college, unit, or division on campus.

Sites Currently Using U.S. Bank ePayment Technology

UWM Foundation - <http://www3.uwm.edu/org/alumni/foundation/epay.cfm>

The UWM Foundation online donation form was the first implementation of U.S. Bank's ePayment technology. This form utilizes its own U.S. Bank instance allowing for customized branding and user outputs. Additionally, a unique instance needed to be created because money donated to the Foundation is held in a bank account separate from other University funds.

Panther Prowl - <http://www.pantherprowl.net>

The UWM Alumni Association's 'Panther Prowl Run/Walk for Scholarships' was the first implementation of the general U.S. Bank ePayment instance. This U.S. Bank instance was configured generically to fit nearly every ePayment need on campus. It was branded with a basic design and general language, with "UWM Online Payment Center" the main title of this instance. The Panther Prowl implementation has received the most traffic of all implementations, bringing in almost \$5,000 in payments and donations.

Katrina Relief Fund - <http://emergencyfund.uwm.edu>

A donation form for students displaced by Hurricane Katrina was created - the second implementation of the general U.S. Bank ePayment instance. This implementation demonstrates the fast development turnaround time afforded by the U.S. Bank system. The donation form was developed, tested, and ready for implementation within 8 hours.

Progress Made Since UWM Foundation Pilot

Since the UWM Foundation donation form was built, our first pilot project, the Web Development team has made some significant progress in the creation of subsequent ePayment applications.

An application has been built that merges data collected on the UWM side with data that is provided in the U.S. Bank remittance file. This allows for the general U.S. Bank instance to be even more generic – passing only the very necessary data U.S. Bank needs to complete a transaction. All other information is contained in databases hosted by UWM, though all credit card information is still hosted on U.S. Bank’s servers.

The Web Development team has worked with U.S. Bank to create a “test” instance that coincides with the general ePayment instance. Prior to the creation of this test instance, the developers were unable to test transactions without entering an actual credit card number. U.S. Bank has provided this test instance to allow the developers to test the ePayment process without disruption to applications running in the live environment.

It appears that there has been improvement in the responsiveness of our U.S. Bank customer service representative. Though, responsiveness is still lacking in other areas of the company. In order to setup automatic retrieval of the daily remittance file, several calls were placed to U.S. Bank’s information technology department with weeks passing before a phone call was ever returned.

Additionally, a method for handling return URLs has been created. U.S. Bank only supports one return URL per ePayment instance, however with UWM’s general ePayment instance, there needed to be a way to handle multiple return URLs. Using session variables, the Web Development team has created a way to handle multiple return URLs while still working within U.S. Bank’s configuration parameters.

The Web Development team is now working with U.S. Bank to automate the retrieval of the daily remittance file. Currently, the remittance file has to be manually downloaded from an administrative web site hosted by U.S. Bank. Once this process has been completed, the Web Development team will have much more flexibility in terms of creating reports on transaction activity for both the client as well as BFS.

Pros and Cons

Like all technology, the U.S. Bank ePayment system is not without its pros and cons.

Pros

- **Security is handled via U.S. Bank**
Having U.S. Bank handle all of the security and hosting of credit card information is invaluable. Hosting that information at UWM would pose a significant security risk, but U.S. Bank’s systems are designed to handle such a risk.
- **Ability to process checks**
Providing users with the ability to process payments with an eCheck is a real benefit. It’s an added feature that many ePayment sites don’t/can’t offer.
- **Processing occurs real-time**
UWM staff do not have to be responsible for processing credit cards manually. Additionally, because credit cards are processed real-time, UWM staff are able to avoid processing bad credit cards or cards with insufficient funds.

- **Development time is minimal**

Now that a back-end database system has been built to process remittance data, Web Development staff estimate that individual ePayment forms can be built in a matter of hours.

Cons

- **Inflexibility**

Perhaps the biggest con of this system is its inflexibility. While it is easy to connect to the U.S. Bank system, the system doesn't provide much flexibility in terms of programming and usability. Some instances of this inflexibility are detailed below:

- *All changes have to go through U.S. Bank.* The developer is very limited in terms of what can be done without intervention from U.S. Bank. Many aspects of development require a call to U.S. Bank – from creating additional parameters to checking remittance files for the most recent test payments.
- *Inability to pass variables back to UWM outside of remittance file.* Variables can be passed from UWM to U.S. Bank, however, U.S. Bank cannot pass variables back to UWM, unless they are included in the remittance file which is provided each night at midnight.

- **Lack of Training/Documentation**

Documentation and training for developers was lacking. There were many instances in which time was wasted trying to solve a problem that would have likely been avoided if there was documentation explaining how the system works and what sort of data the system expects.

- **Many Steps to Make a Payment**

In total, there are 8 screens that a user must click through in order to make a payment or contribution.

- **Difficult to Avoid Duplicative Content**

Because of a legal restriction, the customer must enter personal information (name, address, phone, etc.) on the U.S. Bank side. In some instances it seems odd to ask the customer for that information later in the payment process as opposed to asking for it up front on a form hosted on the UWM side. While that information could be obtained on the UWM side, the customer would just have to re-enter it on the U.S. Bank side.

- **Unresponsive Reps**

The responsiveness of the U.S. Bank representatives has been less than impressive, though to U.S. Bank's credit, they appear to be working on this issue.

Developing New ePayment Applications

With the successful implementation of three ePayment solutions, the U.S. Bank system is ready to be implemented further. Some notes regarding future implementation:

- Development of these applications should be handled by the I&MT Web Development department until detailed documentation and templates are created that would allow other campus web developers to implement their own ePayment solutions.

- Lead time is key. While development can be turned around quickly, each implementation is unique – some requiring more development time than others. A minimum two week lead time is recommended for all ePayment implementations.
- What is required by the client for development:
 - A valid UDDS account number that specifies which account the transacted money should be deposited into. If a client requires a new UDDS be created, the form found at the following URL should be completed:
<http://www.bfs.uwm.edu/ASM/Files/2.2.2.a/4/3.0.0/2-2-02A.PDF>
 - A merchant ID number. Those clients who are already accepting credit cards will have a merchant ID. Clients that require a new merchant ID can obtain one by contacting Ed Nieskes in BFS.
 - A return URL that specifies where the user should be returned upon completion of a successful transaction.
 - A document detailing the form that needs to be created, including the specification of required fields and fields that need to be stored in a database or otherwise returned to the client.
 - Desired launch date.