

Virginia Commonwealth University's Automated Decal Issuance System

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Abstract

Virginia Commonwealth University's ("VCU") Department of Business Services, which manages several auxiliary services, has developed a method for printing parking permits in-house thus reducing time-consuming inventory control efforts and product waste. This new program, launched in August 2002 to approximately 5,000 student parking subscribers, uses a pre-printed permit shell with university logo and colors while incorporating security features preventing forgery. To issue a permit, Customer Service Representatives (CSR) select a parking location, enter the customer's identification number, and an expiration date. The computer application generating the permit tracks the CSR's assigned inventory and the next permit number for the specified location.

This fall approximately 5,000 employees renewed their parking subscription via the Internet. Customer information is stored and updated in a database used to print large quantities of parking permits in-house on a standard laser jet printer, each permit contains the customer's name, address information, instructions, and a punch out hanging permit. Permits are placed into windowed envelopes utilizing an automated inserting machine and mailed to the customer.

As a direct result of streamlining the manual decal issuance and administrative audit processes, VCU's Department of Business Services projects an annual savings of \$45,496 through implementation of this automated process.

Introduction of the Organization:

Virginia Commonwealth University ("VCU") is the most comprehensive urban university in the commonwealth and a top research university in the nation. VCU is located on two campuses that border downtown Richmond providing history and innovation to the diverse student population. The current enrollment for this public institution includes 25,001 students. Comprised of ten schools, one college, the VCU Health System, and the Inger and Walter Rice Center for Environmental Life Sciences, VCU offers more than 130 undergraduate, graduate and professional degrees. The university is a Carnegie I Research University, founded in 1838, and is noted as one of the three largest research doctoral institutions located in the Commonwealth of Virginia.

Statement of the Problem/Initiative:

Virginia Commonwealth University's Department of Business Services manages and operates several auxiliary units, including the Office of Parking and Transportation Services. VCU Parking and Transportation is responsible for providing over 11,500 annual parking subscriptions in 64 different parking facilities. Faculty, staff, students, and visitors requiring day, evening, or resident parking privileges result in 90 different parking decal types in need of issuance.

The previous decal issuance system consisted of maintaining an inventory of approximately 40,000 pre-printed decals. Once the decals were received, they were then grouped by type with the numbers manually recorded into a log. The decals were sent over to Parking and Transportation Accounting, where they were secured in a vault. Considering the pre-printed decals had a value ranging from \$20.00 to over \$600.00, depending upon the type, they were subjected to strict auditing guidelines to minimize the potential for misuse. Upon demand, the accounting unit dispersed the decals among five Customer Service Representatives (CSR) located on two campuses. Each CSR was required to maintain a sufficient inventory of each decal type in order to service customers efficiently. Weekly audits were performed for each CSR to determine the amount of decals sold, remaining inventory, and replenishment needs. Decals that had been issued were manually recorded and each CSR maintained a logbook for their assigned inventory. The process was extremely tedious and time-consuming, requiring expenditures for overtime labor hours during plan subscription periods.

Additionally, issues arose with our pre-printed decal inventory program because of excessive or shortfall inventory levels. As an example, once a new parking facility was obtained, a new decal type had to be created and manually written onto the parking decals until the new pre-printed decal type had been received from the supplier. Also, if a facility was no longer available, the remaining decal types for that location had to be destroyed. During peak sale periods, customer service was delayed and customer service representatives frequently incurred overtime to support the customer demand. Processing errors were also caused by the manual procedure.

Design:

Business Services sought a solution to reduce the time-consuming efforts required to administer the pre-printed decal program, increase customer satisfaction and reduce processing errors. To reach these goals, Business Services redesigned the parking decal to enable parking customer service representatives to print parking decals at the time of issuance. A durable yet printer-friendly material became available through a local printing company enabling the first “shell” decal to be designed. The new design includes the university’s new brand thus also serving as a unique marketing tool for VCU. A designated blank block on the decal shell is used for in-house printing of the decal number and expiration date along with the parking location of the designated parking facility. Enhanced security features were added to reduce counterfeiting since high quality scanners and printers exist. The improved security features include ultra-violet light sensitive ink that is invisible to the eye along with a void screen background that provides a means of quickly identifying authentic decals. To maintain compliance with strict auditing procedures, a pre-printed, incrementing, unique inventory control

number is printed on the back of each permit received from the printing vendor. Shell decals are grouped together in shrink wrapped packets of fifty, with a cover sheet in each pack containing the beginning and ending inventory numbers in the specific packet, significantly reducing the weekly inventory reconciliation time.

While the new decal was being designed, the Business Services Information Technology Team developed a computer application that would support printing the decals in-house. The new automated system tracks the incrementing inventory control number, the name of the CSR assigning the decal, and the sequential permit number to be printed on the decal. This application also generates the necessary information for reports needed to satisfy audit requirements and provides a daily reconciliation of decal inventory for each CSR. Laser jet printers that existed previously are used to print the decals in-house. The printers are compatible with the new system therefore additional costs were avoided.

Implementation:

Business Services selected the students seeking Spring 2002 semester parking decals as a test group to issue this new product. The test group consisted of 5,500 students who used the decals for the spring semester from January until May 2002. This time frame provided the appropriate time necessary to identify any problems or complications with the new automated program and the materials used for the decals prior to university-wide distribution.

Initially, decals were printed on an individual basis until the need for larger batch printing became apparent. A slight redesign in the application was necessary to allow the option

for decals to be printed individually or in a group. The subscriber's name and address is another feature that was added during the trial period. The name and address of the parking subscriber is placed on the same sheet as the decal, in the area surrounding the shell, enabling the single decal sheet to be automatically inserted into a windowed envelope for mailing purposes. By having the name and address printed on the decal sheet, no mailing labels were necessary and errors previously caused by mailing the wrong parking decal to a subscriber was eliminated.

Benefits:

Benefits of the new automated parking decal process include:

- New VCU brand is now visible on over 11,000 vehicles, serving as a marketing tool.
- Streamlined procedures have reduced overtime expenditures and processing errors.
- Increased inventory control and reduced efforts to maintain it.
- Improved customer satisfaction through error reduction and more efficient turn around time for receiving product.
- Security features in the decal, making it easy to determine authentic decals and reducing forgeries.
- New decal types are easily and quickly created for new parking facilities obtained.
- Decals are printed on demand, resulting in complete consumption and eliminating waste.

Based upon the success of the test program, The Department of Business Services decided to implement this new initiative university wide in the fall 2002.

The new automated decal issuance system was introduced to faculty and staff subscribers during the subscription renewal process during September 2002. This initiative allows customers to renew subscriptions via a customer-friendly web order entry system. The new process also enables renewals to be made on an annual basis, rather than the historical bi-annual basis, resulting in Parking and Transportation having greater control over the validity of current decals in circulation.