

1 Billing Day Software

1.1 Self-initiated Solution

In 1996 I was working as the sole system and network administrator for Accucomm Internet Services. I observed problems the customer service office was having with billing and tracking residential and business customers. Having automated most of the system administration work, I developed this complete billing package in my spare time. The president of the company was thrilled with my solution and it replaced the existing application immediately. Directly due to the operational simplification this application caused, **we were able to reduce head count by one office manager for a savings of at least \$26,000** (one salaried employee but this number does not include benefits.) The **monthly income immediately increased by 10% (\$6,000 monthly increase)** because of this application.

1.2 Business Bottom-line Impact

- Decrease in one full time employee (salary of \$26,000)
- Increased monthly income by 10% (\$6,000 monthly increase)

1.3 Application Description

This application stored customer information for residential and business (simple and hierarchical). Customer representatives subscribed customers to services such as PPP, email, web hosting. Once a month, service usage was imported into the database and the software generated regular and over usage charges. Bills were formatted for self-addressing, windowed envelopes and printed by the application. The application exported a credit card charge file that was imported by a bank's credit card charging tool. The credit card charge results were imported back into Billing Day and accounts were updated appropriately. Customer representatives entered manual payments. The software sent payment receipt emails on all payments to the customers.

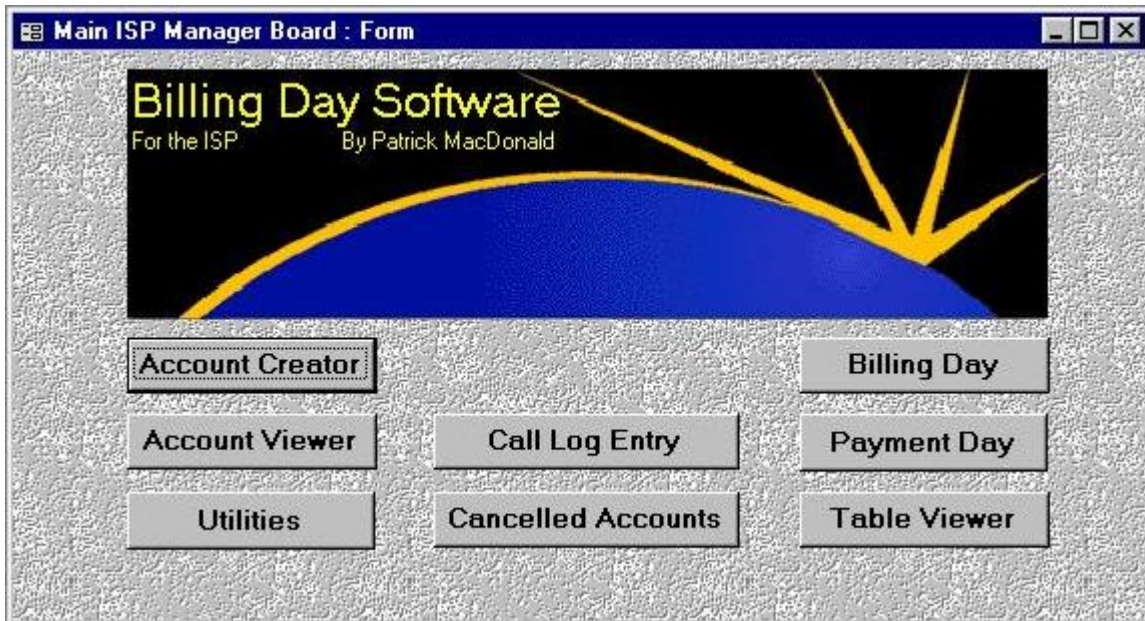
1.4 Platform / Language

Windows MS Access with embedded Visual Basic

1.5 Form Layout

1.5.1 Main Manager Board

Name **Billing Day Software**
Platform / Language Windows MS Access with Visual Basic
Description



The Main Manager Board is used to access the following forms:

Account Creator	Used to create new business and user accounts.
Account Viewer	Used to view individual accounts, view account status, view billing and payment histories and print individual account transactions.
Utilities	Used for various administrative tasks including importing usage records, printing POP statistics by POP site, etc.
Call Log Entry	Used to enter and view sales call logs.
Cancelled Accounts	Used to view cancelled accounts and bill /payment history.
Billing Day	Used to renew accounts and generate bills for the upcoming month and to create an exportable credit card charge text file.
Payment Day	Used to import mass credit card payments or insert individual payments.
Table Viewer	A simple visual design of the Access table usage and process flow.

Name	Billing Day Software
Platform / Language	Windows MS Access with Visual Basic
Description	Designed for billing and tracking payment for both business and residential ISP customers for billable services and usage.
Form	Account Creation

The screenshot shows a Windows-style application window titled "Main Account Creation". The main content area is a form titled "Account Creation Form" with a dark teal background. At the top right, there is a text box for "Account Id" containing the value "36614".

The form is organized into several sections, each with a small icon on the left:

- Personal Information:** Includes fields for "Login" (value: "patrick"), "Company Name" (dropdown menu), "First Last Name" (split into "Patrick" and "MacDonald"), "Street Address" (value: "155 Hidden Lake Drive"), "City" (dropdown: "Athens"), "State" (value: "GA"), "City of POP Site" (dropdown: "Cochran"), and "Zipcode" (value: "30646").
- Contact Information:** Includes "Work" (value: "(770) 522-5972"), "Home" (value: "(706) 549-2015"), and "Fax" (empty).
- Payment and Subscription:** Includes "Payment Method" (dropdown: "user"), "activation date" (value: "5/22/00"), and "Major Subscription" (dropdown: "PPP Dialup").

At the bottom of the form, there is a central button labeled "Continue with Customer Creation" with a blue arrow icon. To its left is a "Clear Form" button, and to its right is an "Exit" button. Below these buttons, there is a "Creation Status" text box containing the value "started".

The Account Creator allowed creation of both User and Individual accounts. Most customers paid for their own services and were considered Individual accounts. Business customers wanted to receive a single bill for multiple users and so User accounts required a different type of payment setup.

The Account Creator also performed some verification logic such as comparing certain information fields to those from cancelled accounts. A message window would be flashed to the screen to alert the salesman that a cancelled customer was re-signing. This would allow the salesman to determine whether the customer left on their own accord or were terminated due to abuse or failure to make payments.

Depending on the major service signed up for different forms would be presented to the salesman to fill out.

Name **Billing Day Software**
 Platform / Language Windows MS Access with Visual Basic
 Description Designed for billing and tracking payment for both business and residential ISP customers for billable services and usage.
 Form Account Viewer

Main Account Viewer

Account ID:

Account Viewer Form

All Services:

Pays For These Services
 PPP Dialup -> 10/1/98

Subscribed to These Services
 PPP Dialup -> 10/1/98

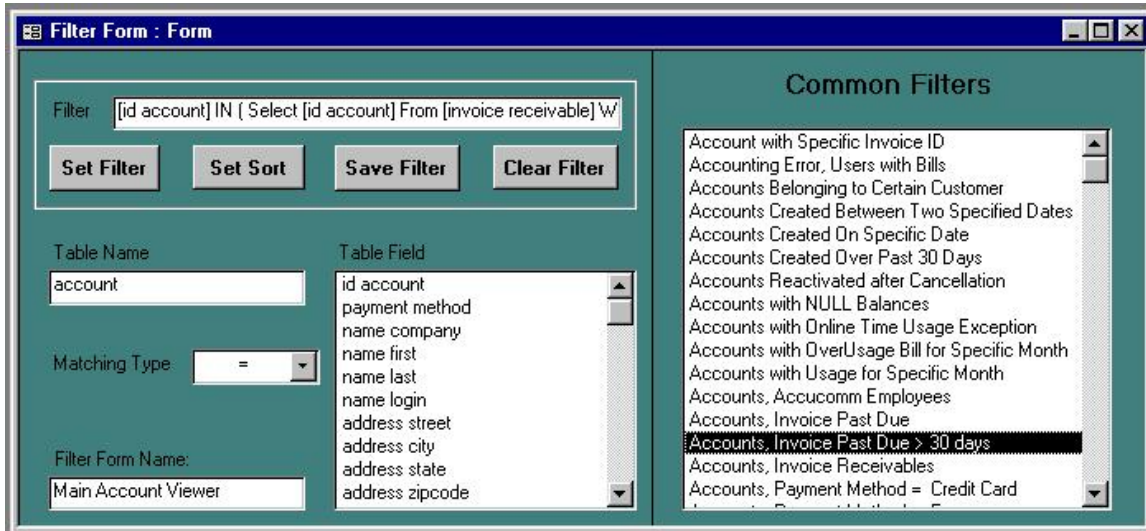
Customer Information:
 Login: Company Name:
 First Last Name:
 Street Address:
 City: State:
 City of POP Site: Zipcode:
 Home: Fax:
 Work:
 Payment Method: Activation Date:
 Total Owed: Balance:

Create Note	Browse Notes	Invoice Receivables	Invoice History	Post Payment	Payment History	Add / Query Subscription	Cancel Account
Print Setup Sheet	Preview Bill	Print Bill	Bill For Software	Software Purchased	ReQuery	Filter	
Print Filtered Cash Bills	Send Late Notices	Print Filtered Over Usage Message	Print Filtered Basic Info	Print Filtered Basic Info 2	Print Filtered Setup Sheets	Print Filtered of Letter	

Record: of 2431

The Account Viewer allows salesmen to perform various tasks on an individual customer and view all of their information. Most of the objects on the page are clickable and activating them causes the corresponding form to open on the corresponding row.

Name	Billing Day Software
Platform / Language	Windows MS Access with Visual Basic
Description	Designed for billing and tracking payment for both business and residential ISP customers for billable services and usage.
Form	Account Viewer Filter



The Account Filter form allowed salesmen to load a subset of customers based on a SQL Where clause. These SQL Where clauses could be saved and stored under a common use name, such as the one selected in the picture.

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Form Billing


Billing Day : Form

Billing Day

Billing Date: Due Date:

<u>Do I do this?</u>	<u>Status</u>
<input checked="" type="radio"/> Import Misc Charges (exa. Over Usage)	<input type="text"/>
<input checked="" type="radio"/> Generate New Bills For Expired Accounts	<input type="text"/>
<input checked="" type="radio"/> Print Free Invoice Summary and Clear	<input type="text"/>
<input checked="" type="radio"/> Print Cash Invoice Notices	<input type="text"/>
<input checked="" type="radio"/> Save Credit Card Charges to File	<input type="text"/>
<input checked="" type="radio"/> Run Credit Card Exporter	<input type="text"/>
<input checked="" type="radio"/> Run Credit Card Charger	<input type="text"/>

Billing Day Status

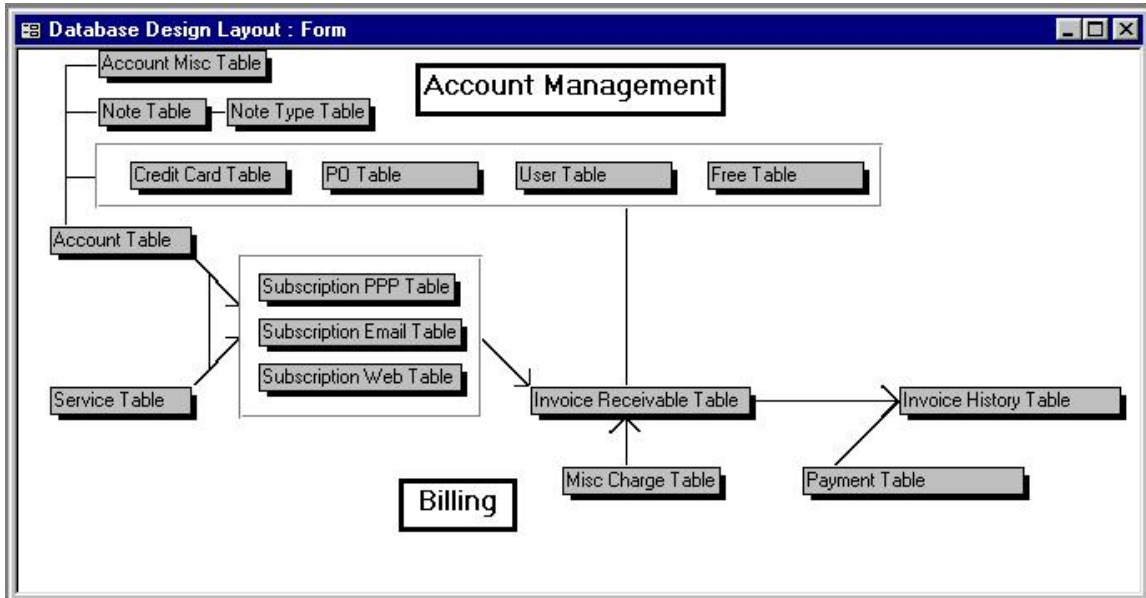


The Billing Day form was used to :

- Renew customer subscriptions to services
- Import usage charges from an external text file
- Generate bills
- Export a list of credit card charges to a text file that could be imported by a credit card charging program
- Print all bills in a form easy to mail

Each of these functions could be unselected to prevent the action from occurring.

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Form Database Design Layout



This is a simple layout used to describe the transaction flows regarding billing and payment.