Modifications made to the Carousel Software system for V2.12 From September 2009

I fiddle with the programs all year long. I do not generally change their version numbers, except maybe to add a letter at the end. When the database (other than the default table) changes, this is a big deal, and that is when the revision number changes. I only try to do that a couple times a year now. The last one was done in September 2009.

You may note that V2.11 is missing. That version was completed, installed at one client site, and then abandoned. V2.12 jumps directly from V2.10.

In this first section, I want to describe the actual database changes made for this revision. All of these changes will be made by utility program CVT2012, which only I am expected to run.

Note that initially, most of these database changes will not be reflected in code. The code may (or may not) come later. Initially I need to implement the Yubikey functions, and a very few other updates. Once the database update has been distributed, the code changes can follow one at a time.

Another major change was to insert dummy database fields, to be used in the future for as yet unknown functions. Note that these will start out as Nulls. Future code enhancements will have to account for that.

The first part of this document will show the database tables that have been changed. Following that will be the descriptions of the code that got changed over the life of this version.

1.   *Delete Carflags Table*
This table was created with the idea that we could capture accessories information for a vehicle. I still want to do this, but I will do it differently.

2.   Drop CarAccessories
This is the table that we will use to capture accessories and other information.
It has never been used. Originally, I thought we should capture whole bunch of stuff that web sites would like to know about. However, it is now rare that anybody is asking us to fill in their web sites. They seem to get their information from vin decoding sites.

3.   Delete Parts Tables
At one time I was going to provide a parts database, but that idea crashed and burned.

4.   *Customer Table*
        a.   *Middle Names*
The secure access system for generating a title in Washington, and the algorithm for generating a drivers license in Washington, all require a middle initial. I will now capture that. This is for both buyer and spouse. Actually, the database stores the full Middle Name, and the read/write routines generate the middle initials.

b.   Spouse Cell Phone

We have had a cell phone entry for the buyer (Customer table), but more and more we need the phone for the spouse as well.

c.   Expand pobox field to 50 to match the address

The PO Box field in the Customer table was only 20 characters, but the buyer's address was 50. They really need to be the same size.

d.   Create PO City and PO State from POCityState, delete POCityState

For some reason, when I created the separate mailing address in the customer table, I combined the City and State fields into one field. This has become a serious pain. So now I am separating the fields, and attempting to regenerate these fields from the existing data.

e.   Dummy Fields: 5 strings, 5 ints

5.   Lengthen wargap answer

The WarGap table contains the answers to questions in the popup that sometimes occurs when printing a form. That is, it gets information that is not otherwise stored in the database that a form would need. But I created it too small for some answers.

6.   Self Finance Tables

It turns out that I have not been calculating the self finance payments correctly when there is a penalty for late payments. I will now provide two ways to calculate this – the original way (for existing contracts) and the new way for new contracts. I need a field in the SF Master table to tell us which calculation method will be used (0 for old, 1 for new), and a column in the SF Detail table to contain the penalties – previously I just added the penalty to the principle.

    a.   Master table
        i.   Penalties

        ii.   Date Closed

I have been asked to enter a Date Closed field into the SF Master table.

        iii.   sfPercent

Sq2l Server does not allow the variable name "percent", while Access does. So I will be converting that variable name for both databases to SfPercent. Same thing in Self FinChange table

        iv.   APR

I found out that the APR and the interest rate are not necessarily the same thing. They are the same only when there is 30 days between start of the loan, and first payment.

        v.   Dummy fields: 2 strings, 2 currencies

    b.   Detail Table
        i.   Penalty (see above)
        ii.   Dummy Fields: 2 strings, 4 currency, 5 ints

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    c.   Change table
        i.   Percent -> sfpercent
        ii.   Dummy Fields: 2 string, 2 ints

7. *Dealer Table*
Several new fields have been added to the Dealer Table:
- ***a.***   Cap for Payments – a max value for a monthly payment
- ***b.***   Extra Site Cost – for those dealerships that have multiple sites on one database
- c.   RV Permit – this is the dealer license number to sell Rvs.
- ***d.***   ORV Permit – this is the dealer license number to sell Off Road Vehicles
- ***e.***   MFA flag – allows or ignores Yubikey requirement
- ***f.***   Dummy Fields: – 5 strings

8. *carcosts table*
- a.   Create Credit Accept Fiddling field, copy data from minbid.We have been using the Auction MinBid flag for Feed Upload uses.
- b.   Delete cc_writedown and cc_qbflag_wd (on hold)
- c.   Dummy Fields: 5 strings, 5 ints, 4 currency

9. **Cust_Cost Table**
- a.   Add payment type – cash, credit, etc. We have had a way to enter the payment type in the Deal program for about a year, but no place to store it. It is numeric. 0 = ?, 1 = cash, 2 = check, 3 = credit card, 4 = cashier check, 5 = money order
- b.   Add apr
- c.   Create cc_NewPlateNo (what plate will be put on the vehicle. – The inventory program captures the car plates and title number when the car is stocked in. Up till now, those same items were displayed in the deal program complete screen, even though the vehicle gets a new title and sometimes new plates. This change creates new fields in the database to hold plate and title numbers after the sale.
- d.   Create cc_NewTitleNo – what is the number on the new title
- e.   Dummy Fields: 5 strings, 5 ints, 4 currency

10. *Create License Fees table*
We have been calculating license fees for several versions, but the fee values were always embedded in code. This is a start to put those fees into a database table. Each row has a Fee Index, a Fee, and a Fee Description. There are three dummy strings also.

11. *Postal Abbreviations* (defPlateSt)
I have had two clients that ship cars not only around the US, but also around the world. My plan ws to allow it to know about all foreign countries. However, I felt that the loading time for all that would be too much, especially for my clients that use Hamachi. It already handles Canadian provinces. I have now added the Mexican states. Up till now, the plate of a car being entered into inventory has been either the local state or Other. More government forms are asking for

exactly where the car came from, not just that it is out of state. So now all such state CBO's will have all of the us, canadian, and mexican postal abbreviations available.

12.   CarMaster table
         a.   Plates Received

I have been asked to generate a report listing those sold cars for which plates have not been delivered yet. To get this, I need a way to indicate that the plates have been received. This field will be either Yes or No. This is in the CarMaster table.   There is a checkbox in the Complete screen of the Deal program to enter this value.

         b.   Fuel Type – gas, diesel, etc
         c.   Model Trim – We have had space for a car model forever. However we did not
                  think to add a place for the trim. So some clients have been adding this to the
                  model, which then confuses things a bit. There is now a separate place to put the
                  Model Trip, right next to the Model itself.

         d.   Drop Optional Equipment field (on hold)
         e.   Dummy Fields: 5 strings, 5 ints

13.   Add space in Make table for Car Vin digit 2
Digit 2 of the vehicle's VIN contains a letter that the manufacturer uses to identify itself. A manufacturer can have several letters, actually. This is one of the five things we check when the user enters a vin. Currently, and still, this check is done in code, where the code knows all the makes and digits. It is really better to put this into the database, where a user can update it. I have created space in the DefMake table for this, but I probably will not get around to populating it and modifying the code for this to be used in the test till later.

14.   Add AprFlag to FinCo Table
This flag, if set to 1, will tell the Deal program to in fact use the APR value calculated above in the bank contract Truth in Lending boxes, and to display it in the Deal program. It will be on a bank by bank option.

15.   Modify the recipts table
Add an autonumber, a receipt type, and expand the details.

16.   Consignment TimeCreated, writedown (on hold)
When a vehicle is deleted from the database, it is in fact copied to the Consignment table. This is so it can be recalled at a later date. There was no timestamp in this file of when the deletion occurred. A report needed this, so we have added the TimeCreated field. At the same time, the long abandoned Writedown field has been deleted.

Actually, I am considering adding a whole bunch of fields, since a whole bunch have been added to the inventory data.

17.   Yubikey

We have to add more security to our application. There are several ways to do MFA. We chose to use Yubikey. While the Yubikey itself can prove that it is a valid key, that key could have come from someplace else. So I need a list of valid serial numbers for the keys that this Dealership has. Here we list the serial number, active, and two extra strings.

Addition: we also add fields for Computer Name, and Sales ID. The thought is, somebody might want to restrict a Yubikey to only one computer, or only one person. The person is defined by the Sales_ID in the Salesman table. You need not use either or any of these fields. If blank and zero, they will be ignored. You can have the serial number appear multiple times.

18.   Boat Stuff
I have a very few boat clients. Currently, the information about the trailer and the boat engines are embedded in the Comments section. I really want to put this in a database table. So I have created a table named BoatTM. It has a stock number, registration, trailer vin, make, model, year, and plate. And for three engines, a Make, Model, Year, Vin and Horsepower.

19.   Connections
This table exists to connect a stock number to some other entity in the database.
It has the StockID, an integer pointer, and four dummy strings.

20.   Add user name to logging
We would like to know who was logged onto the computer when a log entry was made.

21.   Delete RTO table
This table was used for leasing, and we have abandoned all that.
It did not exist in all client's database.

22.   Create MakeModel table (optional)
In an attempt to help databases with large numbers of records (.20k) I have a utility that will create and fill in a table of makes and models. When enabled (in the splash screen) this table will allow faster building of the Models table when a Make is selected in the Inventory program and in the Tradein part of the deal program.

23.   Indexing (optional)
For the same reasons as 23 above, certain fields in select tables have been indexed. These are Inventory Status, RR Short Description, Make, Model, wheresold. These are handled by the Create Index program, to be described later.

24.

Preparation for V2.12 Upgrade
2/16 – 4/17 – 2/19 – 5/23 – 7/23

The following steps need to be done at each of our clients before we can do the upgrade to V2.12. Most of these steps are housekeeping steps that should have been done long ago. Mark things down on the client sheets of paper that I will give you. Note that we are skipping 2.11 and going from 2.10 to 2.12. (Long story...)

A.   If Sql Server: Back Up Database!!!
B.   Following is On the Server unless otherwise noted

1.   Make sure everybody is off of Carousel, everywhere. If Access database, check if there is an ldb file in the auto/db folder. If SS, well, hope for the best.
2.   **Rename Auto** to Auto2010. This May be a problem for Hamachi networks. In that case, will need to copy files to Auto2010, then overwrite (see next part).
3.   Download new 2.012 Auto files. For Hamaci, may need to download each folder into the Auto folder.
4.   **Change name** from Auto2012 to Auto (if that is what the old folder was named).
5.   If **Access: Copy** 2.010 database to 2.012 db.
6.   If **Sql Server: Copy** (database).bak to 2.012/bk just in case we need to do a restore.
7.   If Sql Server: copy the **DSN** file from Auto2010 to Auto.
8.   Make Sure the **install computer ODBC** is pointing to the correct database.
9.   **** **DO THE CONVERSION**. ****
10.   If Sql Server: see if you need a **bk.txt** file and if so, is it in server c:\...\bk folder
11.   **Share** the server Auto folder. The existing share followed the old folder name, I think.
12.   If using **LAW** form, copy 19xxx files from 2.010 dbbgrnd and dbforms folders to respective 2.012 folders.
13.   **Update** all workstations by renaming the Auto folder on the workstation to Auto2010, creating a new Auto folder, then copying the Bin folder from the server to this new Auto folder. That way the old mapped letter should still work. The new Splash program should be found by the icon.
14.   Put AutoDistribute in the shared area on all servers if not there already.
15.   Install the **Chillikat** software on the server if not already there.
16.   Install the **cs2pdf** software on all systems if not already there.
17.   **Print** a list of forms used. I want a copy of who uses what. Admin will do that.
18.   Change the Carousel Address from Northwood Drive to Rockford.
19.   Start using the **change logger** tool every time you do something for a client. So will I....
20.   Get the **license** signed if it has not been already signed. If the client refuses, don't push it and let me know later.
21.   Make sure we have a correct email address for this location. And phone number. My database can handle two phone numbers per client.
22.   Correct our contact people list, owner and sales people. I can handle 3 people in my DB.
23.   Note Buy Here Pay Here, Law, and Sql Server checkboxes, to be updated in master list.
24.

C) Other things to think about during the upgrade

25. Work with the client to inactivate from the forms list any form they no longer use.
26. For sql server computers, set up an automatic backup of SS.
27. Check for any Code Based Forms. If a Text Based Form does not exist for such a form, note it down and I will generate one if possible. If a text based form exists, use it.
28. Check the dbforms/local directory for any client specific forms that they use (eg there is no client name on the form). Make a client named copy of the form in local, and stick a copy of the client named form on a memory stick for me so I can put it in the master updater.
29. Note that if they are still using Authenticom based web updaters and notify me if they do.
30. Talk about scanned forms that we have available that might replace their hard copy forms.
31. Make sure all clients have a 2.12 installation CD and instructions. Put it in the Carousel Binder if they still have one.
32. Make sure they have a memory stick for doing backups, and actually do a backup with them. Give them one if necessary. Alternatively, set up a workstation to do a backup to a local folder for those with multiple machines.
33. See if they have a separate mailing address.

The following are the changes made before the Alpha Gold release

1.   Splash – do Yubikey authentication
The splash program now tests the Yubikey flag in the Deal record. If it is set (1) then it will pop up a message to push the Yubikey button. It forks off a dot net program that reads the Yubikey data, (see next item). This can then be compared to a list of known keys in the Yubikey database table. The Splash program title is changed to add #YK.

2.   Carousel.MFA – does Yubikey authentication
This is a Dot Net program, written by Jarren Long. It gets kicked off my a VB6 program, reads the Yubikey data, sends it to the server, and if the server authenticates, translates the serial number and returns that back to the vb6 program ans an exit code. If it is not authenticated, a zero is returned.

3.   Init Mod to add Yubikey logic
A new subroutine has been written that scans the titles of all active windows tasks, and looks for the #YK at the front of the title.

4.   Deal – leases
Lease logic was added several years ago, for a single client. That client is long gone. So I have ripped the Lease Logic out of the Deal program, and any other programs that leasing might have touched.

5.   Deal – customer screen – zip codes
I have had a table of legal zip codes, and state abbreviations, since the beginning. A while back I added Canadian province codes. Now I have been asked to add country codes for all the countries in the world, since I have a couple of dealers that ship cars out of the US.

6.   Special Tables
I modified the tables where new columns were created to display them. A Boats table is added, but at the moment disabled, as no code has yet been written. RTO has been deleted.

7.   Pay_type
Some time ago, I created (in the lower left of the deal screen) an option set where you could enter the pay type (check, cash, etc). Problem was, that I had noplace in the database to store it. Now it is a flag in the cust_costs table. The logic to process this in the Deal program has been generated.

8.   *Deal – Customer – Middle Initials*
Some government forms now require a middle initial. The Middle Name has been added to the Customer form of the Deal program. Both the Buyer, and the spouse, have this field. The cobuyer would have this field also, since it is essentially the same field. The Middle Initial is created from the Middle Name locally in the program

9.   Deal – Customer – Spouse Cell Phone

Some versions ago, I included a cell phone field for the buyer. Now that everybody and their dog seems to have cell phone, I am including this field for the spouse as well.

10.   Deal – Customer – Mailing Address
A couple of versions ago, I added what was then a PO Box, then later a PO Box City and State, and a PO Box Zip. Actually, these are all mailing addresses. I should not have combined the City and State fields, so in this version, they are separated into individual fields. This all shows up in the Customer form of the Deal program.

11.   Engine Fuel
We have had a slot to define the Engine Fuel Type for about a year, but I had no place in the database to put it. Now it is in the CarMaster record, where it belongs. It is spelled out text.

12.   New Title
We have had only one slot to put the title number, and that was for the title on the car as it was bought by the dealership. We needed a place for the title as sold by the dealer. That is now on the Deal Complete screen.

13.   New Plates
We have had only one slot to put the Plate number, and that was for the plate when the car was bought. In Washington, all dealers must remove those plates and get new ones, so this is sort of meaningless. There is now a place to put the plate number for the car when it is sold, in the Deal complete screen.

14.   Deal – Complete – Plates Received
When a car is sold, and the new plates have come in to the dealership, check this box. This will allow a report to be made of what plates are still outstanding and for how long.

15.   Admin – Report 1208 – received plates
A while back, I wrote a report to list all sold cars and when 45 days from the date of sale would occur. This is because in Washington state, a dealer has 45 days to deliver license plates for sold cars. Now that we have a Plates Received flag in the database, I have separated this report into cars sold but plates not yet in hand, and cars sold and the plates have been received.

16.   Deal – remember last stock number
I put into Inventory the ability to remember the last stock number that was worked on, even through a program closedown or system reboot. That is useful for the Deal program too, and now it will appear on the About page, lower textbox.

17.   Self Finance – change "percent" to "sfpercent"
Sql Server does not allow Percent to be a variable name. I had been testing for which database. Now I changed the Access column name to sfpercent.

18.   Deal, Inventory – postal codes
The state abbreviations for Mexican states have not been added to the drop down lists.

19.   *Deal, Inventory – plate states*

Since the beginning of time, the selections for a vehicle being loaded into ainventory has been: Dealer's state, or Other. More forms are wanting to know where this vehicle was last registered. So now, all State selections will allow for all the states in US, Canada, and Mexico. Someday we will include the rest of the countries in the world.

20.

The following are the code changes made after the production release

1.   7/28/23 – Quick Quote – print and update buttons
You really should not print a recap before you save the data. If you do, you will have a printout saying one thing, and the database saying another. So now the print button is disabled until you click the Update button, after you make any change. Also, the Update button will be Red when some change has been made, and Green after an update or before any changes.

2.   8/23/23 – quickbooks double quote problem
Quickbooks import does NOT like double quotes.

3.   8/29/23 – QuickQuote problem with customers
Over 32K customers makes quickquote blow up. Problem fixed

4.   9/11/23 – 502 form
The Idaho 502 form was not using the default value for the filing fee.

5.   9//23 – FinanceCo – get rid of null
When the FinanceCo table was modified, it presumed a non null for the new APR Flag. However, as new finance companies were created, nobody filled in this with a default value. So the dbutility reader blew up when it found a null.

6.   10//23 – CreateIndex – database utility tool
The updating of my clients to V2012 went well, until I hit my largest client. Severe slowdown of the programs getting database information happened. I tried a lot of things to make it better, most of which helped only a little. I created the program CreateIndexPj to provide the tools to make this happen. These tools are:

Index Inventory Status in the CarMaster table
Index RR Short Description in the Recon table
Index the Make and Model in the CarMaster table
Index WhenSold in the CarMaster table
Helped only a little.

When that did not solve the problem, I thought that the added nulls where dummy fields were added were the problem, so I created a tool to fill in those nulls. Did not help.

It was obvious that the finding of the Makes for a Model in Inventory and Tradein were causing much grief, so I generated a table of just Makes with Models. That helped that issue a lot, but did nothing for the other issues. Note that this feature is optional, and selected by a flag in the Splash program (See below). There is one button to drop and then create the table, and another button to fill in that table.

Finally, I found a bug, sort of, in the modification of the Self Finance Payments. My plan was to add a Penalty field, and convert all the negative payment entries into positive Penalties. Which I

did. Unfortunately, I never wrote to code in the Self Finance program to process this data correctly. So I wrote a Self finance rollback function to revert those changes.

7.   10//23 – A2S – Convert Access to Sql Server
There was such a program in V2010. But this program had to be updated to work with the database of V2012.

8.   10//23 – Splash – select MakeModel useage
As mentioned above, an optional database table named ModelTable was created to speed up the finding of what Models of cars e3xist for a particular Make. This was taking in some cases minutes, since it was done on the fly, dynamically, every time you needed this data. In order to select just which method you are going to use, I used what was the V2010 Stretch flags in the Splash program to mean, if checked, use this new table. Note that the non stretched versions of the Inventory and Admin programs no longer exist in V2012.

9.   10//23 – Admin Report – 508
This report is a clone of the 500 report, but
a) abbreviates Makes to 6 letters, and
b) eliminates some other items to let the YrMakeModel field be longer.
The point of all this is to allow the color of the vehicle to be not truncated.

10.   11/8/23 – Deal/Customer – mailing addresses
When printing a mailing address, sometimes the program inserts the words "PO Box" in front of the address, thinking that the address contained only a PO Box. This works badly when the address is in fact another physical address. So we will stop doing the automatic insert.

11.   12/26/23 – Options Sold
Report requested by VIP

12.   1/9/24 – self finance penalty null
dbutility was not writing something to penalty new field

13.   2/6/24 – Idaho filing fee
Idaho now has a variable filing fee. This requires a new form (still 80136) and you get the value from the default. This affects washington dealers selling to Idaho clients.

14.   4/3/24 – self fin – next payment date wrong on maint display

15.   4/5/24 –Admin--spreadsheet 1170 – CRM
CRM wanted spreadsheet of sold cars w/customers, recon reports 1140 and (something else). Eventually this will be a stand alone generation of an ftp file. For now we have created a report to do this.

16.   5/14/24 –Admin – Sales Recap reports (710–713)
This report has existed for many years. We have now added what bank the sale sued to finance

the sale.

17.   *6/10/24 – FeedGen – CRM*
We have added a feed of cars sold for CRM corporation. It pops up a start and end date. If run by the scheduler, it will only do the current day's sales. Note that for the first time, the scheduler was tried, and actually works.

18.   *6/11/24 – Deal – Birthdays*
It turns out that if you enter a birthdate into the Customer screen as mm/dd/yy, that the system will convert the yy to (current century)yy. Which means that if you enter a birthdate as 3/10/84, you will get 3/10/2084. Probably everybody knows that, but I did not. I will automatically subtract 100 years from such dates. That does leave a problem for somebody that is actually 101 years old, since I will continue to allow his birthdate if entered as 6/10/23 to be in fact 6/10/2023. You will have to enter the four digit year in that case.
19.