

The purpose of this document is to outline the core components of a spec just enough so that programmers and other experts could analyze the project and estimate the effort involved in a proposed development project. Includes an overview analysis of things such as which CU\*BASE features will be affected, what's the ripple effect to things like inquiry programs, maintenance programs, configurations, and the like. Includes an overview of major considerations that might affect how the changes are developed, tested, documented, and rolled out to a single client, multiple clients, or across the entire network.

All amounts and times are estimates based on historical patterns and are subject to change. Detailed specifications and project requirements will be developed separately and may not conform exactly to this initial outline.

Project:	<b>Viewing Check Images via CU*BASE Trans History</b>
Date:	March 31, 2017
Researched by:	Dawn Moore

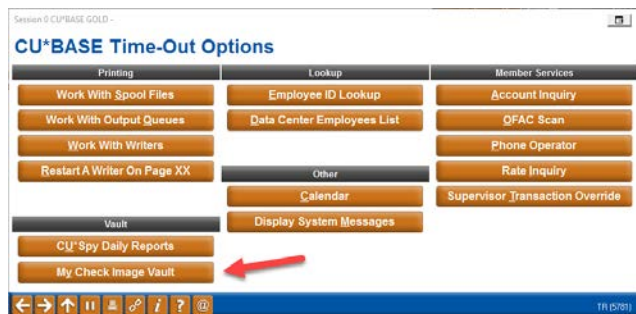
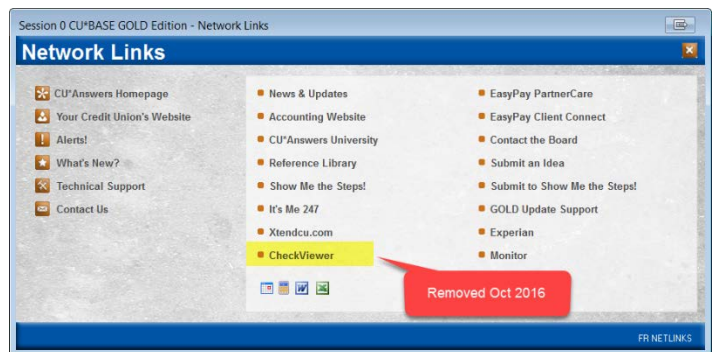
*Status Update 3/31/2017:* During a meeting on 3/29/2017 Randy approved moving to the next phase of the project to develop a technical solution for our IP clients (CU\*Spy) and at least one other check image processor as a proof of concept. CUs who do not use our Item Processing will need to buy it for a one-time setup fee (separate from the fee they pay for check images for **It's Me 247**.)

### Project Summary

This document outlines a couple of approaches to adding functionality to CU\*BASE Transaction History (via both Inquiry and Phone Op) so that employees can access check images by clicking a button on an individual transaction item, similar to how members can view check images via **It's Me 247** online banking.

### A Little History

Prior to September 2016, CU\*Check item processing clients could click a button in the Network Links window. This would perform a direct SSO to CheckViewer and allow any employee to look at any check image for any member. **There were no signon credentials required;** CU\*BASE would pass a CUID in the SSO link and sign the person on, who could then search for any image.



Starting in May 2016, we added a “My Check Image Vault” button on the time-out window that does an SSO to our vault and uses a SmartLink configuration to determine how the link works.

When a user clicks that link, if there isn't already a profile in the vault for that user it creates one for that user, placing them in a default permissions group defined by

the vault administrator. **In the case of our vault, the default permissions are controlled by our IP team.** Therefore, if brand-new users should be granted no authority, or full authority, or something in between, the vault administrator is responsible for tweaking that set of default parameters used when a new profile is set up.

Per Karen Chesbro, new users are automatically assigned to the DEFAULT group within the IP Vault. This group **allows them to access check images** only. (They can't just browse around, though; they still do need to have search criteria for specific checks.) If the CU needs additional authority to work ChargeBacks they have to contact IP staff.

### Proposed Changes to CU\*BASE Trans History

CU\*BASE Transaction History (same screen accessed via Member Inquiry and Phone Operator):

The screenshot shows the 'Transaction Inquiry' window for a checking account. It displays a table of transactions with columns: Business Date, Activity Date, Activity Time, Amount, Check#, Balance, Description, Transfer Acct, ID, and Print Receipt. The transactions include items like 'ACH/JC PENNEY', 'ACH/UELL SPRING LUTHER', and 'ACH/ADAR0776074376'. A callout bubble points to the 'Print Receipt' column, stating: 'No room to squeeze another button onto this already crowded screen. And an option at the bottom of the list would only work for certain items in the list (that's how we do Retrieve e-Receipt and it can be confusing)'.

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### Additional Trans Info window:

The screenshot shows the 'Additional Transaction Information' window for a specific transaction. It displays details such as 'Business Date', 'Activity Date', 'Amount', 'Balance', and 'Check#'. A 'View Check' button is visible at the bottom of the window. A callout bubble points to this button, stating: 'Instead, would add a host-controlled, conditional button here to launch a window to pass the appropriate URL'.

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### Displaying the View Check Button

Ideally the process would work similar to how check images appear in **It's Me 247**, where a button would appear on any check withdrawal transactions that could *potentially* have a check image on file.



Even in online banking, we have no sure-fire way to determine whether there will actually be an image in the vault to view (i.e., there's no direct link-up). Instead, **It's Me 247** uses a set of conditions, including

- Draft # field <> blank
- Description does not begin with 'ACH...'
- Counter-cleared flag on trans record = N
- Maybe others??

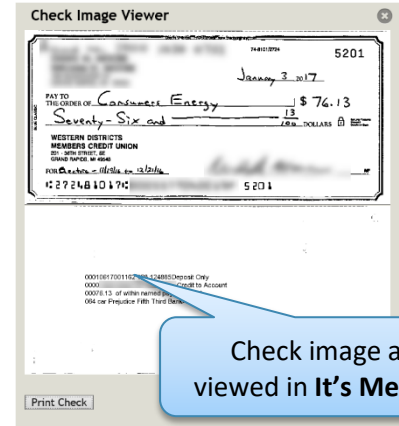
In CU\*BASE we'd use the same formula to decide whether or not to display the View Check pushbutton. That means there is a chance a user would click the button but not find a corresponding image in the vault. There

will probably always be more checks archived than transaction history online, though, so we probably don't need a special configuration for the length of time check images are available.

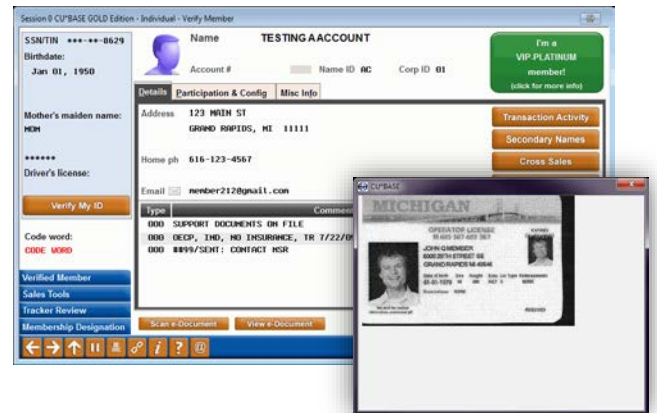
### Grabbing and Displaying the Image

Years ago when we started talking about this idea, the plan was to make it a GOLD-only function where GOLD would read a check number from the trans history list and used it to construct a URL, launch a browser and navigate to CheckViewer. One of the roadblocks at that time was the possible truncation of the 20-byte transaction description on the screen. Using the additional trans info window would be more reliable (that's assuming GOLD should still be responsible for constructing the URL).

Since then we've also added new ways of presenting archived images in CU\*BASE, such as the new window used in Teller posting to display member photo IDs. This is done via host programming that passes a constructed URL to GOLD to launch via a browser.



Eric suggested we have an API grab the image and display it via a new window in GOLD, similar to how we do photo IDs, as opposed to launching a full browser window. This gives us more control over image size, placement and other functionality (rotate, etc.) if we need it. This technique also has the advantage of making each pull a one-to-one request, instead of just allowing a user to log in to the vault and start poking around.



### Things that still need to be understood before deciding on a final method:

- Assumes GOLD .NET can use an API – can it?
- Current photo ID window uses SRCHLNK.exe from the workstation (we do have the source code for this) – is this a good solution?
- Is the image pulled based on Tracer #? or MICR? or xxx in description? or ??? and where do these instructions come from, a SmartLink? Or a configuration? What about different techniques used by different vendors?
- The window that's used for photo IDs is pretty basic – it does have a rotate feature, which may or may not be important here, but it does not allow for printing, so we'd need to add that functionality, maybe add other features that make sense

NOTE: Because of the problems with having to whitelist IP addresses, whatever technique we choose must return an image, not a URL.

### Security Concerns

Need to consider whether there are security concerns about changing how CU employees access check image copies, remembering that many CU employees already can do this, they are just looking for a more convenient technique that helps them serve members more effectively. Consider:

- **CSRs** and data center employees accessing member check images
- **Call Center** and other third parties accessing member check images
- **CU employees** accessing member check images

**NOTE:** One advantage of this new method over the current generic button on Time-out is that **Account Security** controls would be in place, preventing a user from getting to a co-worker's trans history screen and therefore making it more difficult to get a co-worker's check images.

Are there auditor concerns based on employees being able to see member signatures and check MICRs?

From an Idea Form response to this request:

"We have rejected this request in the past, in part because of time/priorities, but also because of concerns about the security of allowing any employee look at any cancelled check for any member. There's a lot of personal information on a check, not just the member's stuff but also all their payees, account numbers written on the memo line, whatever.

"It's one thing to let the member look at their own checks via online banking, and for the CU to give specific employees the ability to log in to their vault to look up images. But it's another entirely to let anyone who can get into CU\*BASE Inquiry or Phone Op have the ability to surf (download, copy, email, etc.) check images on any member, any time they like. For example, if you have a third-party call center like Xtension, should those operators be able to surf around looking at cancelled checks, too? We believe it's going to be a security concern for internal auditors and third parties.

"The people that want this are often the same people who do not want PANs encrypted, data masked, etc. But the reality is today there have to be more barriers to private data than in the past, and that all employees are not equal in accessing private data just for the sake of convenience. It might come down to credit unions who feel strongly enough about it to specifically accept the inherent risks and pay for the development."

The CU's response:

"I have a hard time thinking that information written on a check is a real security concern...this is something that is put through the mail system, printed on ATM deposit receipts, and handed over to a complete stranger when making a purchase (at Walmart).

"Yes, there is personal information on a check, but there is more personal information presented on Phone Operator.... Social, birthday, mother's maiden name, code word, account number, copies of IDs... Could this be an optional feature that allows the CU's the choice if they want to turn it on or not? The security decisions should be pushed to the individual CUs."

## Other Project Components

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### Check Image Vendors to be Supported

- CU\*Check Item Processing / CU\*Spy check image vault
- Other vendors – starting with a single processor as a proof-of-concept, expanding to others as possible (CUs will have to pay for the setup per vendor, in addition to what they pay for images via It's Me)

### New Configurations Needed

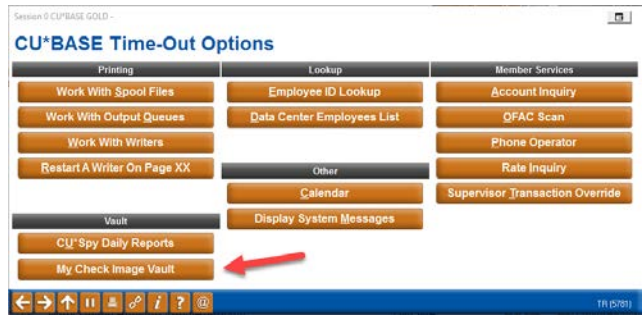
- Activation flag – CU-level flag for activation on/off and IP vendor. Should be able to make use of the existing vendor setting in ARU configuration.
- Security at employee level? – not at this time

### Access Points

- CU\*BASE Transaction History
- **Consider adding to Share Draft Exceptions screen too?** Would keep the CU from returning as many items if they could quickly remedy things like wrong account #s, etc.

### Changes to Existing SSO

- Should we consider changing the current link in the Timeout window to use the new activation flag, too? Currently it's controlled by the presence of a Smart Link in the config, but that's less precise. (NOTE: This button is already conditional based on the host either displaying the option or not; we'd have to change the way the host determines that but GOLD wouldn't have to do anything differently.)



### Estimate of Overall Effort




### Contingencies

Description	Notes
Contingent on completion of other pending project	<input type="checkbox"/>
Contingent on implementation of new vendor relationship	<input type="checkbox"/>
Hardware/equipment/special infrastructure	<input type="checkbox"/>
Certification with 3 <sup>rd</sup> party vendor required	<input checked="" type="checkbox"/> Perhaps? Depends on which vendors we choose to support and what they require, but probably unlikely
Regulatory compliance deadline	<input type="checkbox"/>
Conversion date/Proposed due date	<input type="checkbox"/>

### CU\*BASE Programs/Tables



Task	Notes	Critical for Phase 1 Implementation	Estimated Hours
New Tables	<input type="checkbox"/> Replace an existing table <input type="checkbox"/> Tack on to an existing table <input type="checkbox"/> New independent table		
Changes to Existing Tables	<input type="checkbox"/> Membership data <input type="checkbox"/> Account data <input type="checkbox"/> Transaction data <input type="checkbox"/> New columns only <input type="checkbox"/> Other: <input type="checkbox"/> Changing data format for existing column <input type="checkbox"/> Adding new value to existing column		

Task	Notes	Critical for Phase 1 Implementation	Estimated Hours
Configuration	<input checked="" type="checkbox"/> New configuration(s) <input type="checkbox"/> New flag(s) on existing config <input type="checkbox"/> Other changes to existing config(s)	Yes CU level activation and vendor	
Maintenance	<input type="checkbox"/> New maintenance feature to allow data to be entered manually or adjusted <input type="checkbox"/> Change to existing maintenance feature		
Data Conversion	<input type="checkbox"/> Conversion program needed		
Fix to Program(s)	<input type="checkbox"/> Include fixes to existing programs		
 PITT	<input type="checkbox"/> Add a new cmd key/pushbutton to jump to another screen <input type="checkbox"/> Display new data on the main screen <input type="checkbox"/> Add a new action		
Reports	<input type="checkbox"/> New report <input type="checkbox"/> Change to existing report		
Analysis Dashboards	<input type="checkbox"/> New dashboard <input type="checkbox"/> Change to existing dashboard		
3 <sup>rd</sup> -party Interface	<input checked="" type="checkbox"/> New interface <input type="checkbox"/> New vendor relationship <input type="checkbox"/> Change to existing interface		
Menu Changes	<input checked="" type="checkbox"/> New options <input checked="" type="checkbox"/> Change to existing options		

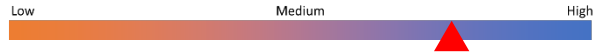
### CU\*BASE Screen Changes



Task	Notes	Critical for Phase 1 Implementation	Estimated # of screens/hours
Adding a field(s) to existing screen(s)	<input checked="" type="checkbox"/> New indicator on host for the Additional Transaction Info window <input checked="" type="checkbox"/> Window with URL? Will we use SmartLinks, or will GOLD construct a URL, or...?		
Rearranging existing screen elements	<input type="checkbox"/>		
New function key or change to existing function key	<input checked="" type="checkbox"/> Add selection option to Share Draft Exceptions screen? (TBD)		
Brand-new screens	<input type="checkbox"/>		
Special GOLD treatments needed	<input checked="" type="checkbox"/> New conditional pushbutton		
Exports/PDF/CSV	<input type="checkbox"/>		
	<input type="checkbox"/>		

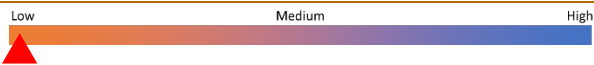


## Processing / Posting



Task	Notes	Critical for Phase 1 Implementation	Estimated Hours
New processing feature	<input checked="" type="checkbox"/> New interface between CU*BASE and third-party check image vault(s) <input checked="" type="checkbox"/> Perhaps via an API?		
Change to existing process	<input type="checkbox"/>		
Change to transaction posting programs	<input type="checkbox"/>		
Impact on general ledger	<input type="checkbox"/>		
Impact on EOD/BOD, EOM, year-end/tax processing	<input type="checkbox"/>		
	<input type="checkbox"/>		

## It's Me 247 Changes



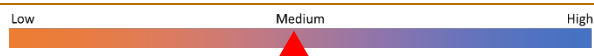
### Scope

System	Notes	Critical for Phase 1 Implementation
Online Banking	<input type="checkbox"/>	
Mobile Web Banking	<input type="checkbox"/>	
Mobile App Banking	<input type="checkbox"/>	
Third-party Mobile App APIs	<input type="checkbox"/>	

### Tasks

Task	Notes	Critical for Phase 1 Implementation	Estimated Hours
New data to be exchanged between the host and the <b>It's Me 247</b> server	<input type="checkbox"/>		
Change to existing data exchange	<input type="checkbox"/>		
New pages	<input type="checkbox"/>		
Change to existing page(s)	<input type="checkbox"/>		
New navigation	<input type="checkbox"/>		
	<input type="checkbox"/>		

## Quality Control Effort



Task	Notes	Estimated Hours
Special test environment needed	<input checked="" type="checkbox"/> Similar to testing for when we add a new vendor for check images from <b>It's Me 247</b> ?	
Date manipulation	<input type="checkbox"/>	

Task	Notes	Estimated Hours
EOD/BOD testing	<input type="checkbox"/>	
EOM testing	<input type="checkbox"/>	
YE testing	<input type="checkbox"/>	
Coordination with other team	<input checked="" type="checkbox"/> Imaging Solutions, OBT, third party vendors?	
Credit union beta testing required	<input checked="" type="checkbox"/> Maybe?	
	<input type="checkbox"/>	

### Documentation Effort



Task	Notes	Critical for Phase 1 Implementation	Estimated Hours
Booklet(s)	<input type="checkbox"/>		
Online help	<input checked="" type="checkbox"/> Minor changes		
Marketing/release materials	<input checked="" type="checkbox"/> Depends on which vendors we support		
Grand opening/special rollout program	<input checked="" type="checkbox"/> At least to CU*Check clients depending on what we support		
	<input type="checkbox"/>		

### Implementation Considerations



Description	Notes
Deployment option(s) for this project <i>(see "Implementation Planning: How Are Deployment Decisions Made?" in the SDLC)</i>	<p><b>(Unknown at this time)</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Major release(includes beta-testing)</li> <li><input checked="" type="checkbox"/> Release without beta</li> <li><input checked="" type="checkbox"/> GOLD update</li> <li><input type="checkbox"/> On-demand priority mod</li> <li><input type="checkbox"/> On-demand minor mod</li> <li><input type="checkbox"/> Active (live) beta (<i>minimal testing, typically for new analytical dashboards only</i>)</li> <li><input type="checkbox"/> Custom release</li> <li><input type="checkbox"/> Special beta</li> <li><input type="checkbox"/> Passive beta</li> </ul>
Priority and risk considerations (including regulatory requirements)	<input type="checkbox"/>
Client considerations	<ul style="list-style-type: none"> <li><input type="checkbox"/> Promised to XX credit union</li> <li><input type="checkbox"/> Contractual commitment for XX credit union by XX/XX/XXXX</li> </ul>
Training considerations	<input type="checkbox"/>
Beta-test considerations	<p><b>(Unknown at this time)</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Includes changes to major files; must block Xtend Shared branch clients from beta-test?</li> </ul>



Description	Notes
	<input checked="" type="checkbox"/> Beta can be passive? <input checked="" type="checkbox"/> No beta possible; must activate for all CUs at once?
Operations and daily/monthly processing cycles considerations	<input type="checkbox"/>
	<input type="checkbox"/>