Agile PLM

Interviews with Agile users at Logitech

Document Description

This document contains a summary of findings from a site visit conduct-ed at Logitech in Fremont by Donna Driscoll and Ben Listwon. Electrical engineers Eric Schmid and Hashmat Afzali and product managers Vincent Liu and Ellen Gorchoff were interviewed about their use of the Agile system. The site visit was conducted on February 2, 2006.

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Related Documents

Interviews with Agile users at Harris Corporation

February 28, 2005

Eric Schmid & Hashmat Afzali
Electrical Engineers

Figure 1. Eric at his desk

Figure 2. Hashmat at his desk

Background

Eric and Hashmat are electrical engineers at Logitech. As a senior electrical engineer Eric is responsible for the electrical design of products and takes products from concept through to production in Agile. He works closely with the mechanical engineering group. He's been with Logitech for 10 years and has been an Agile user for two years, starting on 8.5 and now using 9.0.

Hashmat has been with Logitech since 2003 and in August of 2005 became a junior electrical engineer. He is responsible for the hardware design of products all the way through to production. The bulk of his work in Agile entails importing BOMs and keeping track of component changes. He is new to Agile, having spent a little time with 8.5 and more with 9.0.

Eric and Hashmat are both on Windows XP. The software applications they use are MS Office, various CAD software application such as Capture, P-CAD and Pro-E, Visio, simulation software, and Gerber tools. They use Agile's Java client and all of their work is done on their primary workstation.

They spend most of their time in Agile at the beginning stages of a design project when they need to find out if they already have the parts they need for a design, or if there is something they need to change. They may start out using Agile everyday and then taper off to using it on a weekly basis. On average, Eric said he uses Agile one hour per week and on a peak week he may spend five hours in the application.

For Agile 8.5, Eric attended a few training sessions and received on-the-job assistance from a "local expert" in their Document Systems group. He hasn't received any training on 9.0 and isn't as familiar with the features offered in this version. Hashmat received

formal training on 9.0 and found the training to be overwhelming. He finds that he has to relearn the application, and tasks such as finding a part are not easy. He is confronted with the question "Where do I start?" when logging in to the application.

Although he had questions about how to use Agile, Eric has never used Agile's help system. His questions are not of the type that are commonly addressed in a Help system, such as which fields are visible to outside contract manufacturers. He feels it would be valuable if Agile supported user communities for learning, or Wikis where users could share information.

Eric's work in Agile

One of Eric's primary tasks in Agile is building pre-release BOMs, which are 90% of what a final product will be. The Document Systems Group at Logitech, a peer group to Quality Assurance, governs how Agile is administered and only allows pre-release BOMs to be imported. He uses Agile, the CAD application Capture, and Excel in combination to build a BOM.

Eric begins the process of building his BOM by looking up parts for his design. He refers to an Excel file that is exported quarterly from Agile containing the active parts that are currently being purchased and their pricing information. This spreadsheet can contain on the order of 10,000 components. Eric looks for the most economical parts to meet his design needs because he finds that it is easier to use an existing part than to re-qualify a new part and release it in Agile. He creates a new Excel file that contains three to four candidates for each part for his design, sorts the candidates by cost, then prints the file (see Figure 3). He then goes into Agile and looks at the data-sheet for each part one-by-one

"It's a cumbersome process. You have a description which is easily accessible, but afterwards you need to look at the data sheet because all the critical parameters that are in the document."   —Eric
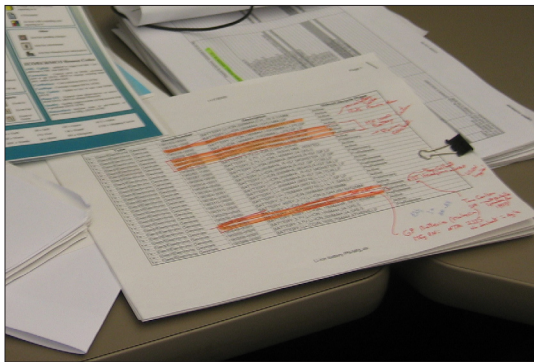

Figure 3. Eric creates an Excel file of candidate parts for his design, then looks up each part in Agile one by one.

in Agile. He said, "It's a cumbersome process. You have a description which is easily accessible, but afterwards you need to look at the dta sheet because all the critical parameters that are in the document." He goes back and forth between his list and Agile, selecting the parts he will use. Eric admits that he could do this work in Agile, but thinks it would be slower if he did so and he's gotten used to doing it this way.

Eric realizes that he could search for parts directly in Agile, but finds that it's easier and faster to do searches in Excel, "Agile is too slow to do searches for me [for component values]". The drawback of searching in Excel is that he can only enter two search criteria at a time. He thinks Agile's logical search is powerful, but had difficulty understanding how to construct Agile's parenthetical search. Learning the keywords necessary to get to the results he's looking for has also been difficult; for example, determining whether to enter "Volt, voltage or Vreg" to get voltage information.

Once he has decided on the parts he will use, he opens his CAD schematic. They have included an extra field labeled LGI_PN to enter Logitech part numbers directly into the schematic. He enters each of the part numbers and then exports the file to Excel. Then he opens the file in Excel and runs a macro that matches the LGI_PN number with the corresponding Agile part number and description. Then he uses the import function to attach the file in Agile. With the pre-release BOM now in Agile, any additional edits are done manually in Agile using the redlining feature with an ECO. He hasn't yet imported a pre-release BOM in Agile 9.0.

Although Eric uses a macro to match Logitech part numbers with Agile part numbers, he told us that their Vancouver team accomplishes this task using OrCAD Capture CIS, a database system to manage parts that are included in the schematics. It has a

feature to synchronize with Agile and costs $5000 a seat "for that little feature". Eric's team didn't feel it was worth it for them and use the macro instead.

In addition to creating preliminary BOMs, Eric also does ECOs and creates new parts about 10-20% of the time for a preliminary BOM.

He frequently needs to access information that is outside of Agile, such as when he's looking up part numbers. In this case he works with both Agile and his exported Capture schematic in Excel at the same time. He's never tried to print information directly from Agile. The only form of communication he uses within the Agile system is notifications, to inform others that he's released an ECO.

If he encounters an issue with Agile, he'll either ask his coworkers, MIS, or their Agile expert in the Document Control Systems group for assistance. It is not clear to him how Agile bugs get resolved. He'd like to have a way to report bugs from within the application. When asked whether he used the Discussion features in Agile he responded, "I didn't even know it existed."

Pain points

Attachments
Eric's biggest pain point in Agile is in how attachments are handled, "Attachments take forever to display, and when they do display you don't have all of the information because the viewer is so limited." He would prefer that Agile open files in their native application if they are available and only user the view as a backup.

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"We have Word documents but this is the 21st century and it should be tied in with the software." —Eric

Lack of version control for BOMs

Although version information is available on a part-by-part basis, there is no version control for BOMs as a whole, to answer the question of "what was the status of the BOM 1 month ago." If a particular part is causing an issue, several other parts might have changed since it was introduced which make troubleshooting difficult.

BOM comparisions

Agile does not provide an easy way to compare BOMs. Eric typically exports to Excel to do comparisons.

Who sees the data?

Agile doesn't provide any insight into what information gets shown to outside contract manufacturers. Logitech would like to keep certain fields confidential and it is unclear to them which fields outside contractors can see and which they cannot.

Search

Searching, especially the requirement to do parenthetical searches, is difficult to master.

Lack of help

No context sensitive help to answer questions like "what does this do?"

Workarounds

Eric has come up with two workarounds to make his work in Agile more efficient. To avoid using Agile viewer, he will save documents locally and then open them in their native application. To get around the lack of version control, he will tie everything together through an ECO.

Features he loves

He feels that Agile is a very flexible system and can fit anyone's business processes. However, he feels the downside is that there isn't a clear way to represent the Logitech process and where he should "start" for specific tasks and what the workflow is for these tasks. This is why he wants the knowledge base.

Requested feature enhancements

Knowledge base

"We have Word documents but this is the 21st century and it should be tied in with the software." They have procedures documented in Word documents that are available in a Lotus Notes database. He'd like this information integrated into the software such that he could click a What Next button to determine what to do next in a specific workflow.

Revision control

He may have between 5-10 windows open in Agile simultaneously, and would like to have the dock feature of Mac OS X that allows users to minimize windows, while also showing thumbnail of the content. He needs to have multiple windows open to do tasks like comparing BOMs.

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Figure 4. Hashmat highlights parts to look up in Agile

Hashmat's work in Agile

Hashmat focused primarily on the areas of the application where he like to see improvements. Much of his time is spent findings parts in Agile. Unlike Eric, he doesn't do many ECOs.

Pain points

Importing
He has experienced a lot of problems trying to import a preliminary BOM in 9.0. He is the first in his group to try importing a BOM in 9.0. One of the issues he encountered was with pop-up blockers. To suppress the pop-up blocker, he learned to hold the Crtl key down to allow the various Agile screens to appear. He also discovered that he is unable to import an Excel file if it contains a blank or undefined column. When it comes to attachments, Agile doesn't display attachments of the .SAM file format of Lotus Notes. As a user of 8.5, he doesn't see much of an improvement in the import function of 9.0.

Searching
Hashmat showed us that when he searches for resistors, entering in "res" and "resistor" bring up different search results. He said, "Basically, I have to know how to describe the item I'm looking for in Agile." He hasn't been able to use Advanced Search in 9.0, and struggled with showing us how he's attempted to complete one. Advanced search requires that he choose the right criteria from the menus and specifically click to get the cursor into text entry fields. He finds that the criteria in the menus result in making the search too broad. He also isn't given the option to save a search to the folder he wants, or to create a new folder in his Personal Searches. He told us he frequently receives

the 'No object found' response when trying to use Advanced Search.

Features he loves

Hashmat is a big fan of the quick search feature introduced in 9.0.

Requested feature enhancements

Hashmat wants more insight into what the various fields in the Agile system mean. For example, when completing an ECO, he wants to know what the various fields are (for example, Reason Code and Change Analyst), which fields are required and what is required at different phase of the ECOs.
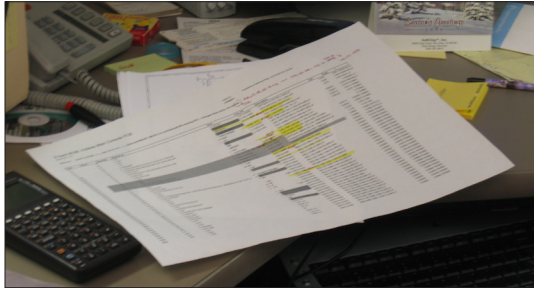
Confidential & Proprietary

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Vincent Liu & Ellen Gorchoff
Product Managers

Figure 5. Vincent at his desk

Figure 6. Ellen at her desk

Background

Ellen and Vincent are Product Managers at Logitech. They are responsible for building production BOMs for Logitech's shipping products. Vincent has been at Logitech for two years and Ellen has been with the company for six months. They are both on Windows XP. The applications they use include Lotus Notes, Agile, Auto-CAD, Oracle, MS Office, and Adobe Illustrator and Acrobat.

They use Agile's Java client and all of their work is done on their primary workstation. Ellen has used the web client, but just to view information. Vincent tried using the web client when it was first rolled out but found that it was "too slow".

As a newcomer to Logitech, Ellen has had equal exposure to 8.5 and 9.0. Vincent has also used both 8.5 and 9.0. They learned to use Agile through "trial and error", although Vincent mentioned that he received basic training on the application when he joined. There are nine product managers and they look to each other for help when they need assistance with using Agile.

They use Agile daily. Ellen says she does 70-80% of her work in Agile. Unlike Eric and Hashmat who are able to import preliminary BOMs into Agile, Vincent and Ellen are not authorized to import production level BOMs. They "begin and stay in Agile", building their BOMs from scratch in Agile.

Vincent's work in Agile

Vincent's primary tasks in Agile include building BOMs, creating ECOs and creating new parts. Typically Vincent will build a BOM through an ECO by adding parts to the ECO one-by-one. In 18 months he has created almost 500 ECOs. When

he needs to make an ECO to a BOM, he typically searches for another BOM that had a similar change for reference. Although he is not authorized to upload BOMs at Logitech, he would prefer to create his BOMs in Excel instead of directly in Agile. Vincent explained that Logitech has built intelligence into their part numbering system. Parts beginning with "9" contain the complete finished good assembly, those beginning with "8" are reserved for engineering and level "6" is reserved for everything related to the packaging of finished goods.

Vincent completes a separate type of ECO to remove old parts from a BOM. They control their production BOMs with Assembly Process Instructions (API), which are simplified copies of the BOM, saved with each part. To complete this process, he needs to make sure that part being removed is not referenced by any API for any BOM that uses that part. Any API that does have an explicit reference to the part must be updated to reflect the removal or change.

He does a "where used" search for the old part and prints the report which identifies every place the part is used. In the report, he looks to see if the part is explicitly mentioned, and highlights the APIs he needs to update (see Figure 7). He finds the "where used" report to be very helpful, because this can be a very time consuming task.

Another application Vincent uses with Agile is Excel. To keep track of costs, he will copy pricing data on parts and paste them into an Excel file. He will use this to compare changes in costs over time or to estimate a project.

Having used both 8.5 and 9.0, Vincent sees an improvement in 9.0 in how attachments are handled. He appreciated that, by default, attachments are

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"Imagine if I have 20 SKUs of the same product, I have to go into each one, one-by-one, to populate it, and that can take awhile."   —Vincent
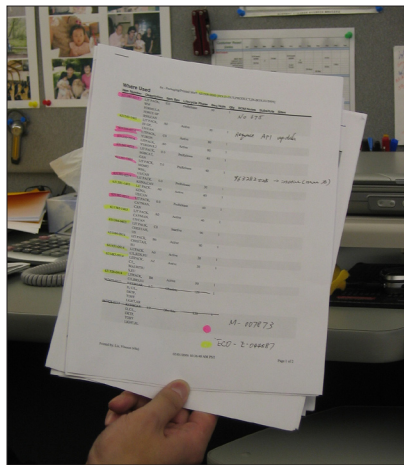

Figure 7. Vincent exports the "where used" report for an old part and highlights the attachments he needs to update.

opened in their native application rather than the Agile viewer.

Vincent typically communicates with his coworkers via IM, email or by walking over to their cube.

Pain-points

Repetitive data entry
Vincent's biggest pain point is repetitive entry of data. It requires three mouse clicks to enter an item description. Product code, unit of measure, lead free and sample submission requirement are the required fields for each item, and all of the fields on Page 3 need to be filled out for a product to go live. "Imagine if I have 20 SKUs of the same product, I have to go into each one, one-by-one, to populate it, and that can take awhile." Vincent has noticed a performance degradation from 8.5 to 9.0, and more mouse clicks required to get his work done.

"The Java thing"
Another pain point for Vincent is "the Java thing", the transition from Windows to Java which he feels created more problems. He explained that Agile is only compatible with a certain version of Java and he isn't able to upgrade when Sun comes out with a new version.

Features he loves

Sending an ECO
Ability to send an entire ECO to another person in the company who has an Agile license and who may not be in the routing for that particular ECO. Since their group manages the worldwide BOMs, there are cases where a given region may develop a specialized

version of a standard product. In these cases it's helpful for him to be able to send the standard version of the BOM as a reference.

Fill up and down icons
Vincent appreciates the function of the fill up and fill down buttons. Although he uses the icons in the interface, the meaning of the iconography was not clear to him, as he commonly referred to the icons as "that little icon there" or "these two buttons".

Recently Visited list
The Recently Visited list is very helpful when he inadvertently closes a window that he needs.

In general, Vincent thinks Agile is a good place to keep track of the BOM and all of documents, and that it is a good front end to tie into Oracle.

Requested feature enhancements

Vincent would like to see improvements in the file transfer capabilities of Agile. Logitech's manufacturing site is in China and it's almost impossible for their users in Asia to download a 100M file. Vincent experienced this first-hand on a recent business trip to China when he attempted to download such a file from Agile and it crashed the application. They've had to resort to other means of transferring files. He said 8.5 had the same problem.

Vincent would also like to have the following features:

- In-line table editing
- Choose columns he wants to see in tables
- Shortcut keys for repetitive tasks

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"If someone has an ECO thats effective in June, I have to wait until June until mine gets processed. I'm sure you can understand the frustration." — Ellen

Figure 8. One of Ellen's ECOs entailed reconfiguring a box to hold more mice.

Ellen's work in Agile

Ellen's typical work in Agile consists of submitting and managing her ECOs. In the 6 months she's been with Logitech she's submitted 81 ECOs. Ellen humorously stated that a lot her time is spent having her ECOs rejected.

For example, at the request of their marketing team, she submitted a ECO to change the configuration of the cardboard box that they use to ship computer mice to accommodate more than 10 mice per box (see Figure 8). She started the ECO on December 5, 2005 and it wasn't until January 20, 2006 that the change was finally implemented.

The ECO was rejected seven times and required several layers of review before finally being accepted. This ECO entailed updating the content in the attachments, including the photos in the assembly process instructions (API) that demonstrate how to put the box together. APIs are created with a packaging software application called Topps. Topps also includes information on the dimensions of packages. When she needs to enter dimension information for parts on Page 3 in Agile, she'll print this information from Topps and then manually enter the information into Agile.

In addition to API files, she adds Word, PDF, and CAD drawings to Agile. She doesn't print information directly from Agile; if she needs to print information, she exports to Excel, selects the columns that she needs and prints.

Ellen often needs to make changes that affect several products. For example, she mentioned that the same change may need to be made to 27 versions of the same keyboards with different language overlays. She's started using the bulk change option in Agile, although she's noticed that the fill up and down

buttons don't always work very well when she's trying to affect a lot of items.

Currently Ellen has very limited access rights at Logitech. To create a new part, she must assign it a temporary part number and then request a true part number with which to replace it from their Document Systems Group. This group serves as a check point at Logitech. They review ECOs and route them for approval.

At her previous job at Apple, Ellen used SAP to manage BOMs and compared her experience with SAP to that with Agile. SAP can manage more than one change to the same item at a time whereas Agile cannot process more than one change at a time to the same item. Ellen explained, "If someone has an ECO thats effective in June, I have to wait until June until mine gets processed. I'm sure you can understand the frustration". In SAP, all of the information for a part is contained on one long form. Ellen prefers to have all of the information in the same place because her experience in Agile has been, "I have to go through lot of pages to look at things". On the positive side, she prefers Agile's robust search capabilities to that of SAPs.

Ellen shared with us model BOMs are not used at Logitech. In a model BOM, a number is given to a product that doesn't change even if the components going in to making that product change. Because the model BOM isn't used, documents like their product brochures that include the product ID numbers need to be updated anytime a product undergoes a component change.

Workarounds

Ellen commonly exports Agile information to Excel to collapse columns and get at the relevant

information she needs, "It's easier to reference in Excel." Like Vincent, she uses Excel to do analyses on the costing information for parts that she copies from Agile.

For their counterparts in other geographical regions, Ellen said her team typically take screenshots to communicate because they've learned that the connection to the application in other countries isn't as good.

Ellen has extended Agile beyond it's intended use by using it as a storage server. When her counterpart in China was unable to get to a file they were jointly working on from Logitech's FTP server, Ellen attached the file in Agile for her and she was able to retrieve it just fine.

Pain points

Repetitive data entry
Ellen's biggest pain point is entering the same information for several items. For example, when she has 200 items to affect, she needs to manually enter the item revision, life-cycle phase, sequence number and quantity for each individual item. She said, "It literally takes me a week to do it, it's such a pain." She would like to be able to affect items simultaneously.

Who sees the data?
Similar to Eric in Logitech engineering, who said he doesn't have any insight into what information the outside contract manufacturers see, Ellen said she has no insight into who sees her ECOs. She would like to know who has access to this information.

Features she loves

Search is the feature Ellen most appreciates about Agile, especially the multiple ways in which one can search for information.

Requested feature enhancements

Ellen would like an easier way to populate fields in Agile. For example, a way to "affect a bulk sequence number or quantity".

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