OORT WMD TDS

<Glance Home screen Base Plug-ins>

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Revision Summary							
Author	Date	Version	Comments				
Jeongim Bae	4/21/2009	0.1	Initial Draft				
Jeongim Bae	4/27/2009	1.0	Updated with test case outline				

	Related Documents							
PM	http://mcpg/WDC/Crossbow/Specs/Glance%20Base%20Plug-Ins%20- %20Feature%20Spec.mht							
Test	http://medpg/OORT/WMD/test/Test%20Design%20Specs/Glance%20Homescreen%20Base%20Plug-ins%20TDS.docx							
Dev	Development document, TRD's, etc							
UE	User documents, manual references, error message files, etc.							
Modelin g	Threat modeling docs, etc.							

1. FEATURE DESCRIPTION — REQUIRED FOR PAGE 1

1.1 OVERVIEW

This Glance Home screen feature sorts various received notifications by favorite contacts rather than applications, and displays them next to their associated contacts. So, we can see who the notifications are coming from in applications.

For native notifications (such as missed calls or unread SMS or emails), an associated plug-in finds matching contacts and then filters them by favorite contacts.

The Glance home screen consists of the framework and plug-ins which are sample/reference code, but good enough to demonstrate the possibility of achieving a variety of goals.

2. Test Scope - Required for Page 1

2.1 WHAT IS COVERED

Interacting with unread text messages plug-in:

- Presenting & reflecting the unread text message plug-in with icons and unread message counts.
- Reading and replying SMS message, or just sending new messages to favorite contacts. Interacting with missed calls plug-in:
 - Presenting & reflecting the missed call plug-in with icons and missed call counts.
 - Viewing and replying missed calls, or just calling to favorite contacts.

Interacting with unread emails plug-in:

- Presenting & reflecting the unread email plug-in with icons and unread email counts.
- Reading and replying emails, or just sending new emails to favorite contacts.

Identical phone number (or email address) which is shared among favorite contacts.

Multiple phone numbers (or email addresses) for a favorite contact

Multiple email accounts set up for a user

Syncing with Desktop Outlook

Reflecting the status on Glance Homescreen when missed call (or unread email & message) was missed/viewed on non-Glance Homescreen

Testing will be done on only SP, USA and 320x240 resolutions

2.2 WHAT IS NOT COVERED

Testing on PPC is not covered as this is SP only feature, and any resolution beside 320x240 landscape mode is not covered.

Complete test coverage of base plug-ins which are sample/reference code.

Text message doesn't support for non-threaded messages.

Quality of UI component icons is not covered.

Glance Homescreen Framework and application plug-ins will be covered on separate specs.

2.3 DEPENDENCIES AND INTEGRATION ISSUES

How does this area relate to other pieces of the product? What pieces does it depend on? What pieces depend on it?

There is a dependency upon the Glance Home screen framework being complete.

2.4 PARTNERSHIP

Consider the parties involved in the project. (e.g developer, core team, peer SDET, etc) What dependencies, if any, do we need to consider during our testing? For automation, how do your proposed changes/additions affect partner team(s)? Describe what measurements are in place to ensure safe/successful handoff to partner(s).

N/A.

2.5 RISKS/COMPLEXITY

What are the most risky areas? Why? Describe how you plan on accounting for and minimizing this risk in your testing.

Treating as a sample/reference code, we might miss some user scenarios.

UX and Security team is not involved at this point.

2.6 KEY SCENARIOS

Katie receives text message from a favorite contact, Jack, and she sees unread text message icon and count aligned with Jack's picture. She can read the email and reply to him quickly. If there is no unread text message, she can send a new text message to him right away.

Katie misses a call from a favorite contact, Jack, and she sees missed call icon and count aligned with Jack's picture. She checks the missed call and reply to him quickly. If there is no missed call, she can call to him right away.

Katie receives an email from a favorite contact, Jack, and she sees unread email icon and count aligned with Jack's picture. She can read the email and reply to him quickly. If there is no unread email, she can send a new email to him right away.

2.7 OPEN ISSUES

Are there open issues regarding the feature? List the bug # and owner. If there is not a bug, then describe the open issues, owner, action item, and time frame for resolution.

What happens on action screen if a favorite contact doesn't have a phone number or email address?

What happens on action screen if a user doesn't set up email account?

3. Test Resources – Required for Page 1

3.1 RESOURCES

Describe the human resources required to test this feature for each of the areas below. What work can be outsourced or completed by a CSG? Use the table below to indicate owners and time estimates for each task.

All estimates should be expressed in **DAYS** and should be **Closed Door Estimates**.

PRE Code Complete

	Pre CC							
#	Scheduled work items	Closed door estimate (days)			Scope of the work items	Actual time for work performed (days)		
		FTE	CSG	Vendor	changed	FTE	CSG	Vendor
1	Dev, PM and TM spec reviews, research and assess test impact.							
2	Full/P1 TDS. Writing a series of test pass and test casing details.							
3	TDS review and make necessary revisions.							
4	WTT test case development. This includes writing complete repro steps in form of outsourcing quality.							
5	Ad hoc testing				Familiarize yourself with your feature and find design bugs near CC			
6	Test case review and make necessary revisions.							
7	Reserve Outsource resource				Create and submit outsource request for manual testing			
8	Lead CSG/Vendor overseeing their test status and progress (applicable to FTE only)							
	Total							
		ı	ı	Automa	tion	1		T
9	Ramp up automation. Familiarize the unfamiliar code.							
10	Complete automation sections in TDS							
11	Code review UIAL from dev.							
12	BVT is written, reviewed and checked in. This is to pass BVT before dev declares CC.							
13	UI Automation to capture screen shots is written, reviewed, and checked in.							
14	Reserve Outsource resource				Create and submit outsource request for manual testing			
	Total							
	Sub Total							

POST Code Complete

				Post C	C			
#	Scheduled work items	Closed door estimate (days)			Scope of the work items	Actual time for work performed (days)		
		FTE	CSG	Vendor	changed	FTE	CSG	Vendor
1	Weekly triage/status meeting							
2	Manual feature test pass on WWE key devices in primary screen orientation							
3	TDS/ADS/WTT update with regards to DCR, add/cut reviews, etc.							
6	Performance test pass (if applicable)							
7	App compatibility test pass (if applicable)							
8	Run AppVerifier and other test requirements per TDS							
9	Bug regressing/closing, adding/updating test cases throughout test passes (item 2 – 8)							
10	Ad hoc testing				Recommend 10-20% of time (4-8 hrs/week) spent finding/regressing bugs			
11	Lead CSG/Vendor overseeing their test status and progress (applicable to FTE only)							
	Outsourced Testing							
12	Sanity test pass on RUS and CHS (pilot)				Vendor to run P1 and P2 tests on non-USA Pilot Languages			
13	Legacy regression test pass on WWE. This includes regressing bug fixes in PS from previous release. Limit to those with high probably risk of regression.							
14	Dynamic Screen Rotation and secondary screen orientation on CEPC or device							
15	Verify test case exists for each fixed bug.							
16	IU Test pass							
	Total							
	A 111 /0 A = 111 111			Automat	ion			I
17	Area Library (DATK) is written, reviewed and check-in.							

18	EC (DATK) is written, reviewed and checked in.				
19	POOM automation (if required) is written, reviewed and checked in.				
20	Cellcore automation (if required) is written, reviewed and checked in.				
21	UBOM automation (if required) is written, reviewed and checked in.				
22	Complete WMD peer code reviews (item 12 – 16)				
23	Complete external code reviews (item 12 – 16)				
24	All applicable automation is completed and running in the lab.				
	Outsourcing				
25	Complete Outsourceable Test Automation		Outsource the automation after EC area library and EC test cases are automated. (<10% area library, ~50% of test cases)		
26	Fix legacy automation failures				
	Total				
	Sub Total				

PRE Release Candidate

				Pre R	С			
#	Scheduled Work Items	Closed door estimate (days)			Scope of the work items	Actual time for work performed (days)		
		FTE	csg	Vendor	changed	FTE	CSG	Vendor
1	Regress/close bugs carried over from post CC. Need 0 bug counts to declare RC.							
2	IU bug bash, dogfooding							
3	RC EC Test Pass							
4	Lead CSG/Vendor overseeing their test status and progress (applicable to FTE only)							
	Total							
				Automa	tion			
5	Fix legacy automation failures from post CC							
6	Verify RTM quality lab automation results to get ready to hand-off to core team							
	Total							
	Sub Total							

POST Release Candidate

				Post F	RC			
#	Scheduled Work Items	Closed door estimate (days)			Scope of the work items	Actual time for work performed (days)		
		FTE	CSG	Vendor	changed	FTE	CSG	Vendor
1	Regress/close bugs carried over from pre RC (if any)							
2	Loc verification on RUS and CHS.							
3	Lead CSG/Vendor overseeing their test status and progress (applicable to FTE only)							
	Total							
				Automa	tion			
4	Close any outstanding automation bugs, verify RTM quality lab results to get ready to hand-off to core team							
5	Handoff maintenance of Automation to Vendor							
	Total							
	Sub Total			·				

Estimate Summary

	FTE	CSG	Outsource
Pre Code Complete			
Post Code Complete			
Pre RC			
Post RC			
Total			

	Total Manual Estimate	Total Automation Estimate
Pre Code Complete		
Post Code Complete		
Pre RC		
Post RC		

Summary	_	_
Total (days)	0	0

3.2 HARDWARE

Describe the hardware resources required to test this feature. What device is this feature intended for? Does this feature require a special hardware configuration? What platforms must this feature be tested on? Are any special network configurations required?

CEPC support is required for daily automation. If the feature you are implementing can not be run in the lab environment or via automation explain the reasons. Describe any other hardware resources required to automate this feature.

Does the feature require or will be affected by different resolutions? What resolutions will testing cover?

Windows Mobile Standard 320x240 131dpi (Jackie or vCEPC SP)

Table of resolutions supported for Windows Mobile 6.0:

Device Type	DPI	Resolution	Dynamic Rotation?
PPC	96	240x240	-
PPC	96	240x320	Yes
PPC	128	320x320	_
PPC	192	480x480	_
PPC	192	480x640	Yes
PPC	192	480x800	Yes
SP	96	176x220	No
SP	131	240x320	Yes
SP	131	320x320	No
SP	131	440x240	No
SP	131	400x240	No
SP	131	240x400	Yes
SP	131	320x240	No

3.3 SOFTWARE

Describe any additional software resources required to test this feature. Are there any Fakeril, FakeWiFi, etc. changes needed? Any C++ API level cases needed?

Fakeril tool

3.4 Tools

Will you be using or developing any special tools? Who will be writing these tools (FTE, CSG, and Outsourced)? How long will it take to create the tools?

All estimates should be expressed in **DAYS** and should be **Closed Door Estimates**.

Tool Name	Closed Door Estimate	Owner (alias)	Notes
TOTAL Tools(days)			

3.5 AUTOMATION

Is automation necessary for this feature? Is so, is there existing automation for this area?

What is the automation strategy for this feature?

What level of automation will be completed for this feature?

Who is the core team owner for automation in this area?

N/A

3.6 BUG TRACKING

What is the product studio path where bugs should be logged?

What are the DevCode(s) associated with this feature?

Path: \Devices Platform\Shell\Homescreen

DevTeam: Samsung

3.7 ADDITIONAL NOTES

What additional test planning is required for this feature? Do new cases need to be added? Special regression testing?

4. DETAILED TEST STRATEGY

4.1 FEATURE DETAILS

When the Glance home screen is applied, base plug-ins called unread text messages, missed calls, and unread emails get loaded along with the favorite contact plug-in.

These plug-in modules present and reflect unread text messages, missed calls, and unread emails with icons and counts as there are incoming messages, calls, and emails, and they become read or responded.

Each of the plug-in modules keeps listening for notifications of unread text messages, missed calls, and unread emails on favorite contacts and sorting them into favorite contacts.

The plug-in modules interact with SMS, call dialer, or email applications to respond to missed calls, or read text/email messages.

4.2 GENERAL TEST PLAN

We will create and execute manual test cases on 3 major areas as follows:

Interacting with unread text message plug-in

Interacting with missed call plug-in

Interacting with unread email plug-in

Automation won't be implemented for this testing.

Testing will be done only on

- Language : USA

- SP 320x240 131dpi by using Jackie (or vCEPC SP)

PPC:

	Radio		SKU		Resolution		Other
	GSM	CDMA	Premium	Standard	Landscape	HiDPI	
Build Equivalency Class #1	N/A	N/A	N/A	N/A	N/A	N/A	
Build Equivalency Class #2							
Build Equivalency Class #3							

SP:

Radio		Platform		Resolution		Resolution
GSM	CDMA	QWERTY	Other	Landscape	HiDPI	240x320

Build Equivalency Class #1	Full	N/A	N/A	N/A	Full	N/A	N/A
Build Equivalency Class #2							
Build Equivalency Class #3							

We run test pass for GSM only. CDMA has no difference, but we don't guarantee for CDMA

4.3 SETUP/INSTALLATION TESTING

Describe what setup needs to be tested and your approach. Consider the behavior of the feature after using "Image Update" from a previous release.

4.4 AREA BREAKDOWN

Describe how you will divide the area into manageable chunks (i.e. outline of areas and sub areas). Breakdown areas into order of priority.

Consider what automation areas will need to change. What directories will contain changes? What directories will be affected by the changes?

Unread text message plug-in:

- Presenting the unread text message plug-in with icons and unread message counts.
- Reflecting the unread text message plug-in with icons and unread message counts.
- Sending a new text message when a favorite contact has no unread messages.
- Reading/Replying a text message when a contact has unread messages.

Missed call plug-in:

- Presenting the missed call plug-in with icons and missed call counts.
- Reflecting the missed call plug-in with icons and missed call counts.
- Calling for a favorite contact when a favorite contact has no missed calls.
- Viewing and replying a missed call when a favorite contact has missed calls.

Unread email plug-in:

- Presenting the unread email plug-in with icons and unread email counts.
- Reflecting the unread email plug-in with icons and unread email counts.
- Sending a new email when a favorite contact has no unread email.
- Reading/Replying an email when a contact has unread email.

4.5 API TESTING

Are there any APIs that require automation as part of this feature? If so, list and describe the API

Explain how you will automate the API testing. What language? How will the daily automation execute the API test cases?

4.6 AUTOMATION AREA LIBRARY CHANGES

Are there any existing Area Library methods being changed? If so, list and describe.

What Area Library references need to be added to current Area Library code? Why?

List and describe any new methods that will be added to the Area Library, including method signatures.

Are there existing Area Library methods (possibly in a different Area Library) that perform the same or similar operation?

Does your feature have new UI? Be sure to add test cases which take screen captures for the localization test pass.

N/A

4.7 ERROR HANDLING/FAULT TOLERANCE

What methods will you use to invoke error testing? What is the expected behavior?

N/A

4.8 IMAGE UPDATE (IU) IMPACT

The image update (IU) technology is used by many OEMS to update phones in the field with service packs based on fixes from Microsoft and their own platform. Please assess the testing needed for IU scenarios based on the design of this feature by answering the questions below.

- Does the design of this feature require any changes that impact public APIs used by external /internal apps. If so, please describe.
- Will the design affect the database schema? Will any changes affect the way user data is stored?
- Will any new registry keys be added, removed, or moved? Will any registry keys be repurposed for new functionality?

Describe the test approach for verifying that all the scenarios above are handled effectively during an IU update from a previous milestone to the current milestone. Include verification steps for ensuring the IU update was successful and the feature functions as expected. Are there any test scenarios that require additional tools?

N/A

4.9 Performance

Are there any performance requirements for this feature? What areas do you plan to investigate or target with benchmark tests, profiling, etc. in the Nexus timeframe? Is boot time affected by this feature?

N/A

4.10 STRESS

Describe your strategy for stress testing your component. Will you test low/no memory, disk space scenarios?

If targeted MTTF should be run on the component - what exe/area will you target?

Are there any modifications you can make to the device to ensure better coverage of your component during MTTF? (ie: pre-populating the device with docs/music/photos/email etc?)

Are there any xHopper parameters that will ensure better coverage of your feature? (ie: rotation, Incoming SMS/Voicemail/PhoneCall, Launching an exe every so often?)

MTTF will be run for stress testing on Glance Homescreen Framework.

4.11 **LEAK**

Describe your strategy for Resource Leak testing your component.

How can you find Memory leaks/Handle leaks/etc?

App Verifier should be run on the code prior to code complete. Are there any concerns for this feature?

App Verifier will be run on Glance Homescreen Framework to make sure there is no leak

4.12 BATTERY

Does this feature have any implications on power consumption? If so, why?

We will run DoU on Glance Homescreen Framework

4.13 International/Localization

How will you ensure that your area will work correctly for International markets? Address International Sufficiency or "Z" issues (date/time, currency formats, sort order, etc.), as well as use of extended, Unicode, and/or DBCS characters. Be sure to include the pilot languages in your testing. Pilot language breakdown: 60% English, 20% Fareast, 20% European

N/A we only support USA build.

4.14 SECURITY

Are there any Security issues that are concerns for this feature? Should file fuzz testing be done for this feature? If any file is accessed or used in this feature, then file fuzzing is required per Microsoft security.

File Fuzzing Tool Sites:

http://medpg/mese/sdl/Pages/MeseSecTools.aspx http://seciis/sites/sec/tools/default.aspx

ittp://seciis/sites/sec/toois/deradit.asp

N/A

4.15 LOGO TEST KIT

Logo Test Kit is a suite of both manual and automated tests created by a Microsoft team and given to OEMs to run on their devices. All their products need to pass these tests before they can sell their devices include Microsoft product software on their products. For any major AKU release, the WMD team runs a LTK pass as part of their EC criteria. The goal of the test run is to identify code defects or regressions that could cause an inaccurate test case failure on OEM devices. This pass ensures each AKU can pass the

logo test and thus saves time and money for both Microsoft and our OEMs. Should the feature be added to the LTK? Why?

No

LTK won't be passed since this is sample/reference code.

4.16 RELEASE CRITERIA

What scenarios need to be part of the milestone exit/release criteria? Are there specific metrics that must be met?

The release criterion is all test cases pass for test cases with P1, P2 priority.

4.17 DOCUMENTATION

Is there any documentation associated with this component? How will you verify its accuracy? List the location of the documentation

5. TEST CASE OUTLINE

\$\Crossbow_OORT\Shell\Today/Home\Glance Homescreen\Base Plug-ins

6. FUTURE RELEASE ISSUES

List issues or bugs, which need to be resolved or revisited for the next version of the product. This is also good place to describe any ideas you have for future testing approaches, strategies, tool ideas, etc.

7. GLOSSARY & ACRONYMS

Term/Acronym	Definition

Test Case Outline and Titles

Interacting with unread text message plug-in:

- Presenting the unread text message plug-in with icon and unread message counts.
 - o P2. Verify a dimmed icon is presented when there are no unread messages
 - P2. Verify a regular icon and count is presented when there are unread messages
 - o P2. Verify a total "1" to "8" unread message count is presented when there are less than 9 messages.
 - P3. Verify a total "9+" unread message count is presented when there are 9 or more unread messages.
 - P2. Verify the decremented count is presented when the unread messaged is read.
 - o P2. Verify a dimmed icon is presented as soon as unread messages are all read

In case txt messages are received from different phone numbers of a favorite contact.

- P2. Verify a total unread message count is presented for that favorite contact who sent txt message using different phone numbers
- o P2. Verify the decremented count is presented when unread text messages from one phone number are read.
- P2. Verify a dimmed icon is presented as soon as unread messages are read from all phone numbers.

In case identical phone number is shared among favorite contacts.

- o P3. Verify each unread message count is presented on multiple favorite contacts
- P3. Verify each decremented count is presented on multiple favorite contacts when the unread messaged is read
- P3. Verify the current total unread message counts is presented on multiple favorite contacts
- Reflecting the changes on the unread text message plug-in with icon and unread message counts.
 - P2. Verify the decremented unread message count is presented when an unread txt message was viewed on other home screen layout and then switching back to Glance Homescreen.
 - P2. Verify the incremented unread message count is presented when a txt message was received on other home screen layout and then switching back to Glance Homescreen.
 - o P2. Verify a txt message can be sent to changed phone number of favorite contact when change is made on desktop and synced with device.
 - P2. Verify a txt message can be received from changed phone number of favorite contact when change is made on desktop and synced with device.
 - o P2. Verify the text message plug-in still operates during low battery states
 - P3. Verify a txt message can be received from a favorite contact and status is updated while unlocking the device
 - P3. Verify a regular icon and count is presented after turning on the device if a txt message receives while power cycling.
 - P3. Verify a regular icon and count is presented after turning on the device if a txt message receives while soft resetting.
- Sending the text message when there is no unread messages:
 - o P1. Verify txt message is sent through "new-text-message" screen if a favorite contact has only one phone number in case there is no unread message.

- o P2. Verify txt message is sent through "select-a-contact" screen if a favorite contact has more than 1 phone numbers in case there is no unread message.
- Reading/replying the text message when there are unread txt messages
 - P2. Verify "text-message-response" screen is displayed when there is 1 or more unread txt message from same phone number
 - P2. Verify txt message can be replied to the favorite contact after reading a message from same phone number
 - P2. Verify customized "inbox view of message" screen is displayed when there is
 2 or more unread txt message from the different phone number
 - ✓ It brings up customized "inbox view of message" screen
 - ✓ Messages are sorted by contacts
 - ✓ Only unread messages are displayed
 - ✓ Message can be replied on "inbox view of message" screen
 - ✓ Messages are viewed and replied to that contact.

Interacting with phone call plug-in:

- Presenting the missed call plug-in with icon and missed call counts.
 - o P2. Verify a dimmed icon is presented when there is no missed call.
 - o P2. Verify a regular icon is presented when there are missed calls.
 - o P2. Verify a total "1" to "8" missed call count is presented when there are less than 9 missed calls.
 - P3. Verify a total "9+" missed call count is presented when there are 9 or more missed calls.
 - P2. Verify missed call count is reset for all favorite contacts once "missed calls" screen is viewed.

In case identical phone numbers are shared among favorite contacts.

- o P3. Verify each missed call count is presented on multiple favorite contacts
- Reflecting the changes on the missed call plug-in with icon and counts.
 - P2. Verify the incremented unread message count is presented when a call is missed on other home screen layout and then switching back to Glance Homescreen.
 - o P3. Verify missed call count is reset even though missed call was viewed on other home screen layout and then switching back to Glance Homescreen.
 - P2. Verify a call is placed to a changed phone number of favorite contact when change is made on desktop and synced with device.
 - P2. Verify a missed call from changed phone number of favorite contact is presented when change is made on desktop and synced with device.
 - P2. Verify the missed call plug-in still operates during low battery states
 - P3. Verify a missed call from a favorite contact is presented while unlocking the device
 - P3. Verify a regular icon and count is presented after turning on the device if a call is missed while power cycling.
 - P3. Verify a regular icon and count is presented after turning on the device if a call is missed while soft resetting.
- Calling to a favorite contact when there no missed calls.
 - P1. Verify call is placed to the contact's number if the favorite contact has only one phone number
 - o P1. Verify "Contact card" is brought up to select one of associated phone number if the favorite contact has 2 or more phone number.
- Reading/Replying the missed call

- o P1. Verify "Missed Call" screen is brought up if there are 1 or more missed calls.
- o P2. Verify a call can be replied to a favorite contact on "Missed Call" screen

Interacting with email plug-in:

- Presenting the missed email plug-in with icon and unread email counts.
 - o P1. Verify a dimmed icon is presented when there are no unread emails
 - P1. Verify a regular icon and count is presented when there are unread emails for an email address.
 - o P2. Verify a total "1" to "8" unread email count is presented when there are less than 9 emails.
 - o P3. Verify a total "9+" unread email count is presented when there are 9 or more unread email.
 - o P3. Verify the decremented count is presented when the unread email is read.
 - o P2. Verify a dimmed icon is presented as soon as unread email are all read

In case user set up 2 or more email account

 P2. Verify a regular icon and count is presented when there are unread emails for multiple email address.

In case emails are received from different email addresses of a favorite contact

- P2. Verify a regular icon and count is presented when there are unread emails from multiple email addresses.
- P2. Verify the current total unread email count is presented as soon as unread emails from a phone number are read.
- P2. Verify a dimmed icon is presented as soon as unread messages are read from all email addresses.

In case identical phone number is shared among favorite contacts.

- o P3. Verify each unread email count is presented on multiple favorite contacts
- P3. Verify each decremented count is presented on multiple favorite contacts when the unread email is read
- Reflecting the changes on the missed email plug-in with icon and counts.
 - P2. Verify the incremented unread email count is presented when an email is received on other home screen layout and then switching back to Glance Homescreen.
 - P3. Verify the decremented unread email count is presented in case an email was viewed on other home screen layout and then switching back to Glance Homescreen.
 - P2. Verify an email can be sent to changed email address of favorite contact when change is made on desktop and synced with device.
 - P2. Verify an email can be received from changed email address of favorite contact when change is made on desktop and synced with device.
 - o P2. Verify the missed email plug-in still operates during low battery states
 - P3. Verify an email can be received from a favorite contact and status is updated while unlocking the device
 - P3. Verify a regular icon and count is presented after turning on the device if a txt message receives while power cycling.
 - P3. Verify a regular icon and count is presented after turning on the device if a txt message receives while soft resetting.
- Sending a new email when there is no unread email.

Case1: user has 1 email account; Favorite contact had 1 email address.

 P2. Verify email is sent through "compose-email" with the contact's email address in the "to:" field if there is only one email address

Case2: user has 1 email account; Favorite contact had 2 email addresses.

- P3. Verify "choose email" screen is displayed if the favorite contact has 2 or more email addresses
- o P3. Verify email is sent through "compose-email" screen with selected email address in the "to:" field once one of email account was selected on "choose email" screen.
- o P3. Verify email can be sent to each email address of a favorite contact

Case3: user has 2 email accounts; Favorite contact had 1 email address.

- P2. Verify customized "Messaging" selection screen is displayed if multiple email accounts were set up
 - ✓ "Messaging" selection screen displays only the email accounts
 - ✓ All email accounts are displayed
 - ✓ "Messaging" is displayed on the tile.
 - ✓ "Select" is displayed for SK1, "Menu" for SK2
- P3. Verify email is sent through "compose-email" screen with selected email address in the "to:" field once one of email account was selected on customized "Messaging" screen.
- P3. Verify email can be sent from each user email account to a favorite contact

Case4: user has 2 email accounts; Favorite contact had 2 email addresses.

- P2. Verify customized "Messaging" selection screen is displayed if multiple email accounts were set up
 - ✓ Verify this "Messaging" screen displays only the email accounts
 - ✓ Verify all email accounts are displayed
 - ✓ Verify "Messaging" is displayed on the tile.
 - ✓ Verify "Select" is displayed for SK1, "Menu" for SK2
- P3. Verify "choose email" screen is brought up if the favorite contact has 2 or more email addresses
- o P3. Verify "compose-email" screen is brought up with selected email address in the "to:" field once one of email account was selected on "choose email" screen.
- P3. Verify email can be sent from each user email account to each favorite contact email addresses
- Reading/replying an email when there are unread emails.

Case1: user has 1 email account; Favorite contact had 1 email address.

- o P1. Verify the unread email is immediately opened when there is 1 unread email
- P2. Verify the email is replied to the favorite contact after reading an unread email.

Case2: user has 1 email account; Favorite contact had 2 email addresses.

- o P2. Verify the filtered list of unread emails are displayed
 - ✓ Verify It brings up customized "list of unread email" screen
 - √ Verify only unread emails are displayed
 - ✓ Verify "Delete" is displayed for SK1, "Menu" for SK2 and soft keys work
- P2. Verify each email can be viewed and replied to that contact on the "filtered list".
- o P3. Verify the email can be deleted when "Delete" is pressed on the "filtered list"

 P3. Verify Menu option is displayed when "Menu" is pressed on the "filtered list" and each menu option works properly.

Case3: user has 2 email accounts; Favorite contact had 1 email address.

- P2. Verify customized "Messaging" selection screen is displayed with unread email count if multiple email accounts were set up
 - ✓ Email accounts which has unread emails are only displayed
 - ✓ Unread email counts are displayed next to email account name
 - √ "Messaging" is displayed on the tile.
 - ✓ "Select" is displayed for SK1, "Menu" for SK2 and soft keys work
- P2. Verify the filtered list of unread emails are displayed when one of account was selected on customized "Messaging" selection screen
 - ✓ It brings up customized "list of unread email" screen
 - ✓ Only unread messages are displayed
 - ✓ Unread messages are only for a selected email account
- P2. Verify each email can be viewed and replied to that contact on the "filtered list".
- P3. Verify emails can be deleted when "Delete" is pressed on the "filtered list"
- P3. Verify Menu option is displayed when "Menu" is pressed on the "filtered list" and each menu option works properly.

Case4: user has 2 email accounts; Favorite contact had 2 email addresses.

- P3. Verify customized "Messaging" selection screen is displayed with unread email count if multiple email accounts were set up
 - ✓ Email accounts which has unread emails are only displayed
 - ✓ Unread email counts are displayed next to email account name
 - ✓ "Messaging" is displayed on the tile.
 - ✓ "Select" is displayed for SK1, "Menu" for SK2 and soft keys work
- P3. Verify the filtered list of unread emails are displayed when one of account was selected on customized "Messaging" selection screen
 - ✓ Verify It brings up customized "list of unread email" screen
 - ✓ Verify only unread messages are displayed
 - ✓ Verify unread messages are only for a selected email account
 - ✓ Verify unread emails are from different email address of a favorite contact.
- P2. Verify each email can be viewed and replied to each contact on the "filtered list".