OORT WMD TDS

<Bug130801- Korean Lunar Calendar Feature >

Contact Information		
PM Owner	Roi Kim	Roikim
Dev Owner	Young Lee KyuWang Lee	Younglee Kwlee
Test Owner	Jeongim Bae	v-jbae

Revision Summary			
Author	Date	Version	Comments
v-jbae	Jan 20 2009	0.1	Initial Draft
v-jbae	Jan 22 2009	0.2	Updated
nipatel	Jan 26 2009	1.0	Added Automation Part.
v-jbae	Jan 27 2009	1.1	Updated after review

Related Documents	
PM	http://mcpg/WDC/Crossbow/Specs/Lunar%20Calensdar%20DCR%20-%20Feature%20Spec.mht
Test	http://mcpg/OORT/WMD/test/Test%20Design%20Specs/130801_Korean_Lunar_Calendar.docx
Dev	http://mcpg/DocLib/Spec%20Store/Lunar%20Calendar%20Appointment%20Dev%20Design.docx)
EAS V14 R4	http://exweb/14/Specs/E14 Spec Library/EAS_LunarCalendarSupport.docx
Modeling	Threat modeling docs, etc.

1. Feature Description – Required for page 1

1.1 Overview

Currently, non-Gregorian calendar items are not synced properly, so lunar calendar-type appointments appear as Gregorian calendar date in Windows Mobile devices.

Exchange 14 ActiveSync (R4) has made a design change to be able to indicate non-Gregorian calendar items as it includes the <CalendarType/> XML element in the recurrence EAS XML schema.

This Korean lunar calendar feature involves changes on AirSync, PimStore, and CalStore modules to parse new XML elements from Exchange ActiveSync, and store calendar types into a record of EDB as well as the calendar view user interface module to enforce read-only interactions. This feature is enabled by default on Korean builds and can be enabled by registry settings.

2. Test Scope – Required for Page 1

2.1 What is Covered

Inner-working as well as interfacing with calendar items associated with a lunar calendar type.

- Configuring calendar type supports by registry settings (Korean lunar calendar is recognized by default on Korean build)
- Calendar items are synced properly via the Exchange 14 ActiveSync (not only over the air, but also pass-through Internet connection).
- Read-only interactions in detail, agenda, week, and month views of Calendar.
- Calendar items of a non-Gregorian calendar type are not synced down to Desktop while setting up a new partnership (The device has partnership with Exchange server and sets up another partnership with Desktop).

Full test pass for KOR and CHS builds.

Regression testing on USA and RUS builds.

Regression testing with Exchange 12 ActiveSync, Desktop ActiveSync, and non-lunar calendar items.

2.2 What is not Covered

Mobile Outlook's inner-working as well as interfacing with the following PIM items:

- Calendar items associated with a non-lunar calendar type.
- Task items associated with a calendar type.
- Meeting request items (e-mail in Inbox) associated with a calendar type.
- Contact and other PIM items that might have data time properties such as birthday, anniversary, etc.

Mobile Outlook's interactions with Desktop ActiveSync.

Desktop Outlook's interactions with Exchange ActiveSync.

General syncing with Exchange 12 ActiveSync (except some regression test)

Exchange 14 ActiveSync protocol

2.3 Dependencies and Integration Issues

This feature depends on the non-Gregorian calendar type support in Exchange 14 ActiveSync (R4).

2.4 Partnership

Exchange ActiveSync team is expected to deliver non-Gregorian calendar type support in calendar, and meeting request email in Exchange 14 R4 timeframe.

UX team needs to sign off on the user interfaces such as dialog boxes and strings.

LOC team needs to deliver localized resources for newly introduced strings.

Dev and test deliverables need to be carried forward to Windows Mobile 7.

2.5 Risks/Complexity

- The lunar date conversion happens only for lunar calendar types. The solar calendar items are not changed.
- The lunar date conversions exist only on CHS, JPN and KOR builds.
- This feature only works on Exchange 14 ActiveSync.
- The user experience is still compromised via Desktop ActiveSync.

2.6 Key Scenarios

Mobile Outlook is getting Korean lunar calendar items to be synced properly via Exchange 14 ActiveSync as the user creates new recurring Korean lunar calendar.

Mobile Outlook provides the user with read-only interactions with Korean lunar calendar items where he or she cannot edit, or transfer them in various calendar views and their menus.

2.7 Open Issues

The user experience is still compromised via Desktop ActiveSync.

- User creates a recurring lunar calendar item on Desktop Outlook and syncs a device via Desktop ActiveSync. The lunar calendar item is still displayed as Gregorian dates on the device. Later, the device will sync with Exchange Air Sync and this will be incorrectly updated to Gregorian date on Exchange server.
- User creates a recurring lunar calendar item on Desktop Outlook at work and syncs a device via Exchange 14 ActiveSync. The lunar calendar items are displayed properly as lunar date on the device. Then, the user syncs the device with a new notebook via Desktop ActiveSync at home. At this time, the lunar calendar item is not synced to desktop. The user may see sync error of the lunar calendar items in the Desktop ActiveSync while doing the first sync.

Exchange 14 sever built off the binaries will have the fix when the check-in is done this week, but dogfood servers will have this fix around Mid-Feb, or it could be a while (months).

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 changed	Actual time for work performed (days)		
		FTE	CSG	Vendor		FTE	CSG	Vendor
1	Dev, PM and TM spec reviews, research and assess test impact.	1	1					
2	Full/P1 TDS. Writing a series of test pass and test casing details.	1	2					
3	TDS review and make necessary revisions.		1					
4	WTT test case development. This includes writing complete repro steps in form of outsourcing quality.		3					
5	Ad hoc testing	1	1		Familiarize yourself with your feature and find design bugs near CC			
6	Test case review and make necessary revisions.		1					
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)	2						
	Total	**5**	**9**					
Automation								
9	Ramp up automation. Familiarize the unfamiliar code.	3						
10	Complete automation sections in TDS	1						
11	Code review UIAL from dev.	0.5						
12	BVT is written, reviewed and checked in. This is to pass BVT before dev declares CC.	2						
13	UI Automation to capture screen shots is written, reviewed, and checked in.	0.5						
14	Reserve Outsource resource				Create and submit outsource request for manual testing			
	Total	**7**						
	Sub Total	**12**	**9**					

POST Code Complete

Post CC								
#	Scheduled work items	Closed door estimate (days)			Scope of the work items changed	Actual time for work performed (days)		
		FTE	CSG	Vendor		FTE	CSG	Vendor
1	Weekly triage/status meeting	1						
2	Manual feature test pass on WWE key devices in primary screen orientation		8					
3	TDS/ADS/WTT update with regards to DCR, add/cut reviews, etc.		.5					
6	Performance test pass (if applicable)							
7	App compatibility test pass (if applicable)							
8	Run AppVerifier and other test requirements per TDS			1				
9	Bug regressing/closing, adding/updating test cases throughout test passes (item 2 – 8)		1.5					
10	Ad hoc testing		1		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)	0.5						
	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	**1.5**	**11**	**1**				
Automation								

17	Area Library (DATK) is written, reviewed and check-in.	7						
18	EC (DATK) is written, reviewed and checked in.	2						
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.	3						
	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	**12**						
	Sub Total	**13.5**	**11**	**1**				

PRE Release Candidate

Pre RC								
#	Scheduled Work Items	Closed door estimate (days)			Scope of the work items changed	Actual time for work performed (days)		
		FTE	CSG	Vendor		FTE	CSG	Vendor
1	Regress/close bugs carried over from post CC. Need 0 bug counts to declare RC.		.5					
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		**.5**					
Automation								
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		**.5**					

POST Release Candidate

Post RC									
#	Scheduled Work Items	Closed door estimate (days)			Scope of the work items changed	Actual time for work performed (days)		
		FTE	CSG	Vendor		FTE	CSG	Vendor
1	Regress/close bugs carried over from pre RC (if any)		.5					
2	Loc verification on RUS and CHS.							
3	Lead CSG/Vendor overseeing their test status and progress (applicable to FTE only)							
	Total		**.5**					
Automation								
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		**.5**					

Estimate Summary

	FTE	CSG	Outsource
Pre Code Complete	12	9	
Post Code Complete	13.5	11	1
Pre RC		.5	
Post RC		.5	
Total	25.5	21	1

	Total Manual Estimate	Total Automation Estimate
Pre Code Complete	14	7
Post Code Complete	12.5	12
Pre RC	.5	
Post RC	.5	

Summary		
Total (days)	**27.5**	**19**

3.2 HARDWARE

This feature is available for Windows Mobile Standard (MQ9 or Excalibur) and Professional devices (Raphael or Hermes). It can be tested on Samsung device if an image (WM6.5) is given from Samsung.

This feature is screen-resolution agnostic as we use a standard warning message box.

E14 Account:

Internet Facing – for internet mail flow

Server: mobile14.syncxp.net

Domain: mobile14dom

Account: nipatel1, nipatel2, nipatel3, nipatel4

Password: OMLab01!

Release: E14

Milestone: R4

Build#14.00.0472.000

OWA : http://mobile14.syncxp.net/owa

CorpNet Facing - for internal only

Server: mobile14

Domain : mobile14dom

Account: nipatel1, nipatel2, nipatel3, nipatel4

Password: OMLab01!

Release: E14

Milestone: R4

Build#14.00.0472.000

E14 account for emulator:

Server: 4367r9-b30

Domain:bcyjkl-dom

User:Nirav

Pwd: J$p1ter

SSL turned OFF

Note :

- Build #521 has the fix and it can be checked on

http://sharepoint/sites/omsyncmini/default.aspx.

- SSL is not required on the device.
- You can find a step-by-step guide for connecting to mobile14.syncxp.net at http://omlab -> click on “How to: connect Outlook to our DTap servers”.

3.3 SOFTWARE

N/ASSL is not required.

3.4 TOOLS

N/A

3.5 BUG TRACKING

Path: \Windows Mobile\Sync

DevTeam: Samsung

DevCode: Lunar

3.6 ADDITIONAL NOTES

N/A

4. Detailed Test Strategy

4.1 Feature Details

Exchange 14 ActiveSync indicates lunar calendar items by including elements such as <CalendarType/> and <IsLeapMonth/> into the recurrence EAS XML schema where the calendar type can either be '20', '14', or '15' respectively for Korean, Japanese, or Chinese lunar.

Then, the AirSync module parses the XML elements of calendar type and leap month coming through Exchange 14 ActiveSync.

This lunar calendar feature is configured by a registry setting --- Korean lunar calendar items are parsed and stored properly through the CalStore module only if 'AllowSecondaryCalendarTypes' registry value (under [HKLM\Software\Microsoft\Calendar] registry key) has '20'; otherwise, they are defaulted to and stored as Gregorian.

Mobile Outlook enforces read-only interactions in various Calendar views so it shows a standard warning message box when a user tries to beam, cut, or copy lunar calendar items.

4.2 General Test Plan

Manual testing on Korean lunar calendar items is as follows:

- We configure the feature by registry settings.
- We sync new, deleted, changed Korean lunar calendar items via Exchange 14 ActiveSync.
- We read and then try to edit or beam Korean lunar calendar items using Mobile Outlook.
- We sync new, deleted, changed Chinese lunar calendar items via Exchange 14 ActiveSync.
- We read and then try to edit or beam Chinese lunar calendar items using Mobile Outlook.

Manual testing for regression on other calendar items is as follows:

- We sync new, deleted, changed Gregorian calendar items via Exchange 14 ActiveSync.
- We sync new, deleted, changed calendar items via Exchange 12 ActiveSync.
- We sync new, deleted, changed calendar items via Desktop ActiveSync.

PPC:

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

SP:

	Radio		Platform		Resolution		Other
	GSM	**CDMA**	**QWERTY**	**Other**	**Landscape**	**HiDPI**	
Build Equivalency Class #1	Full	N/A	N/A	N/A	N/A	N/A	
Build Equivalency Class #2							
Build Equivalency Class #3							

4.3 SETUP/INSTALLATION TESTING

No Setup/Installation for this feature.

4.4 AREA BREAKDOWN

- Properly configuring the feature by registry settings,
- Read-only interactions with right soft key (SK2) menu from Detail, Agenda, Day, and Week views,
- Read-only interactions with Agenda View tap-and-hold menu from Detail, Agenda, Day, and Week views(PPC Only),
- Properly syncing lunar calendar items through Exchange 14 ActiveSync (over the air and pass-through Internet connection),
- Not syncing lunar calendar items on devices down to Desktop Outlook.
- Nothing is regressed when syncing non-lunar calendar items via Exchange 14 ActiveSync.
- Nothing is regressed when syncing any calendar items via Exchange 12 ActiveSync.

- Nothing is regressed when syncing any calendar items via Desktop ActiveSync.

4.5 API TESTING

N/A

4.6 AUTOMATION AREA LIBRARY CHANGES

```
        /// <summary>
        /// Enable Lunar Calendar on non-Korean build by setting the
regkey
        /// </summary>
        public void EnableLunarCalendar();

        /// <summary>
        /// Disble Lunar Calendar on non-korean build by removing the
regkey
        /// </summary>
        public void DisableLunarCalendar();

        /// <summary>
        /// Verify Lunar Calendar is enabled by default on Korean
builds
        /// </summary>
        public void VerifyLunarCalendarRegistryKeyValue();

        /// <summary>
        /// Verify lunar calendar items cannot be edited,deleted, or
tranferred warning message box
        /// </summary>
        public void VerifyMessageBox();

        /// <summary>
        /// Verify lunar calendar item is synced correctly
        /// </summary>
        public void VerifyLunarCalendarItem(Calendar item);

        /// <summary>
        /// Check if current month is leap month of Lunar year
        /// </summary>
        public void IsLeapMonthOfLunarYear(int month);
```

Nirav will work with E14 team to see if he can leverage any of their automation for this feature. He will be also adding more area library/helper methods as needed during coding.

4.7 ERROR HANDLING/FAULT TOLERANCE

N/A

4.8 IMAGE UPDATE (IU) IMPACT

This doesn't have IU impact since a new registry key is added.

4.9 PERFORMANCE

No performance impact. The date conversion can be done but only happens when lunar calendar items are accessed by calendar.

4.10 STRESS

N/A

4.11 LEAK

N/A

4.12 BATTERY

N/A

4.13 INTERNATIONAL/LOCALIZATION

IDS_LUNAITEMWARNING is newly defined, so need to verify the newly introduced string from LOC team such as "Lunar calendar items cannot be edited, or transferred on Windows Mobile".

Full test pass on KOR and CHS

4.14 SECURITY

N/A

4.15 LOGO TEST KIT

No

4.16 RELEASE CRITERIA

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

Properly configuring the feature by registry settings,

- Korean lunar calendar should be recognized on KOR builds when the registry value has '20'.
- Chinese lunar calendar should be recognized on CHS builds when the registry value has '15'.
- Korean lunar calendar should not be recognized on KOR build when the registry value is missing or doesn't have '20'.
- Chinese lunar calendar should not be recognized on the device when the registry value is missing or doesn't have '15'.
- Multiple lunar calendars can be enabled or disabled by simply including the CalendarTypeID ("20","14","15" ; KoreaLunar, JapanLunar, ChineseLunar).
- Korean lunar calendar should be recognized by default on KOR builds.
- Lunar calendar should not be recognized by default on USA builds.
- Chinese lunar calendar should not be recognized by default on CHS builds.

Read-only interactions with right soft key (SK2) menu from Detail, Agenda, Day, and Week views (KOR/CHS),

- When Beam Appointment is attempted, a warning message box pops up that reads lunar calendar items cannot be edited, or transferred.
- When Cut Appointment is attempted, a warning message box pops up that reads lunar calendar items cannot be edited, or transferred.
- When Copy Appointment is attempted, a warning message box pops up that reads lunar calendar items cannot be edited, or transferred.
- When Send as vCalendar is attempted, a warning message box pops up that reads lunar calendar items cannot be edited, or transferred.

(PPC Only)Read-only interactions with tap-and-hold menu from Agenda, Day, and Week views (KOR/CHS),

- When Beam Appointment is attempted, a warning message box pops up that reads lunar calendar items cannot be edited, or transferred.
- When Cut Appointment is attempted, a warning message box pops up that reads lunar calendar items cannot be edited, or transferred.
- When Copy Appointment is attempted, a warning message box pops up that reads lunar calendar items cannot be edited, or transferred.

Properly syncing lunar calendar items through Exchange 14 ActiveSync over the air and pass-through Internet connection (KOR/CHS),

- Syncing new monthly recurring lunar appointment.
- Syncing new yearly recurring lunar appointments starting/ending on regular months.
- Syncing new yearly recurring lunar appointments starting/ending on leap months. (e.g. May 2009)
- Syncing deleted monthly and yearly recurring lunar appointments.
- Syncing changed monthly and yearly recurring lunar appointments.
    - Changing the series of occurrences in the recurrence range.
    - Changing one or more occurrences in the recurrence range.
- Syncing changes to recurrence ranges as follows:
    - No end date, end after X occurrences, end by
- Syncing changes to appointment duration (0 minutes, 30 minutes, all day).
- Syncing lunar appointments with 1 occurrence.

Updating lunar calendar items to Desktop Outlook when the device has partnership with Exchange server and sets up another partnership with Desktop (KOR/CHS),

- Not syncing monthly, yearly recurring lunar appointments down to Desktop Outlook.

Syncing lunar calendar type meeting request (KOR/CHS),

- Syncing monthly, yearly recurring lunar appointments when meeting request is accepted on the device.

Note: There are Korean lunar leap months such as 2001 (4), 2004 (2), 2006 (7), 2009 (5), 2012 (3), 2014 (9), 2017 (5), 2020 (4), 2023 (2), 2025 (6), 2028 (5), 2031 (3), 2033 (11), 2036 (6), 2039 (5), and so on --- where 2001 (4) means the 4th month, April in year 2001 is followed by a leap month.

$Crossbow_OORT/Outlook Mobile/Sync/Automated/Lunar Calendar, $Crossbow_OORT/Outlook Mobile/Sync/Manual/Lunar Calendar

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
PIM	Personal Information Management
EAS	Exchange ActiveSync