WxDE Sprint Management

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| The purpose of this brief is to describe the WxDE Sprint plans. The development activities are defined in separate documents that put these development activities in context. For example, one document describes the user interface development activities and another describes the VDT integration activities. This document organizes those activities chronologically, so summarizes development plans on a weekly basis. |

# Overview

The Sprint plans listed in this document refer to activities defined in the two other documents listed in the table below.

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| --- | --- |
| Document | Description |
| WxDE UI Dev | Describes the WxDE user interface, both existing and planned, and lists the activities related to furthering development of the WxDE user interface. |
| WxDE VDT Dev | Describes the WxDE-VDT integration and lists the activities related to furthering developing of the WxDE-VDT integration. |

These documents define the activities required to provide specific functionality (e.g., support the WxDE user interface), so these documents help a reader understand the activities in the context of how the activities help achieve an overall goal of supporting WxDE functionality. This Sprint document organizes those activities chronologically, which helps the reader understand what work is being done each week.

# Current Sprint

## Sprint Plans – 10/7/2013

| Sprint Activity | Status |
| --- | --- |
| WxDE Infrastructure Development | |
| [No activities planned] |  |
| User Interface Development | |
| Add Admin menu options to the WxDE. The need for an Admin menu option was identified in late September. This option should be immediately to the left of the Login option and only available to users logged in with Super User privileges.  ***Note: Posted to Demonstration Instance on 10/11/2013.*** | Chuck  Completed 10/11/2013 |
| Develop the Data Sources Metadata page.  ***Note: Posted to Demonstration Instance for review under Admin menu option on 10/11/2013.*** | Chuck  Completed 10/14/2013 |
| Develop the Platforms Metadata Page.  ***Note: Posted to Demonstration Instance for review under Admin menu option on 10/11/2013.*** | Chuck, Completed 10/14/20134 |
| Change the descriptions for the color coded States. I think users will have trouble interpreting these descriptions. Consider using “Data Available”, “Data Restricted”, and “No Data”. | Chuck, completed 10/14/2013 |
| Fix the hyperlink for the word “contrib.csv”. This link is currently broken. It should go to the Terms of Use Page, which should include a link to the Contributors metadata page.  ***Note: This should link to the Data Contributor meta data display page.***  ***Note: The link has been changed, but the link is not active because the Terms of Use Page is not available.*** | Chuck, partially completed 10/14/2013 |
| Create documents. Create the Sprint Status document template and begin to create Sprint Status documents.  ***Note: We created three types of documents to post: WxDE UI Design, WxDE VDT Design, and WxDE Sprint Management.*** | Bobby  Completed 10/14/2013 |
| Implement page. This involves creating the directory to hold the Sprint Status documents and creating the page itself, which will be simple because it relies on the WxDE Documents List template.  ***Note: Implemented as a single page for all WxDE documents.*** | Chuck  Completed 10/14/2013 |
| Implement page. This involves creating the directory to hold the User Interface Development documents and creating the page itself, which will be simple because it relies on the WxDE Documents List template.  ***Note: Implemented as a single page for all WxDE documents.*** | Chuck  Completed 10/14/2013 |
| Implement page. This involves creating the directory to hold the VDT Integration Development documents and creating the page itself, which will be simple because it relies on the WxDE Documents List template.  ***Note: Implemented as a single page for all WxDE documents.*** | Chuck  Completed 10/14/2013 |
| VDT Integration Development | |
| Develop tool to format IMO data into VDT format. We will obtain the IMO data from the MN IMO source re-format this into netCDF format.  ***Note: The original plan was to pull the MN IMO data directly from the WxDE. However, the WxDE does not currently ingest all of the data required by the VDT. During Phase 1, we will obtain the data for the VDT directly from the MN IMO provider. During Phase 2, we will update the WxDE to ingest all the required IMO data and update the VDT to obtain that data from the WxDE.***  ***Note: Tool used to obtain MN IMO data and format into netCDF format. Formatted data was used to successfully run standalone VDT.*** | George  Completed 10/14/2013 |
| Update the WxDE database to accommodate VDT probe data. The VDT wrapper will provide VDT probe data outputs for inclusion in the WxDE database. This step is to assess database changes that might be required to accommodate this data and implement those changes.  ***Note: We do not currently believe this will require any database changes. It will only requires changes to WxDE metadata, such as defining new observation types for some VDT output fields. The main concern is with the VDT quality checks and integrating those with the WxDE quality checks.*** | George / Bobby  Completed 10/14/2013 |
| Enhance the IMO data collectors to collect additional data required by the VDT. The VDT requires some fields in the IMO data not currently stored in the WxDE database. We believe that the IMO data collectors are flexible enough to extract this data from the IMO sources via configuration changes. This change is included in case software changes are required. | George  Completed 10/14/2013 |
| Add the VDT as a third type of data collected by the WxDE – the three types being fixed platform observations, mobile data, and VDT mobile data. The WxDE currently differentiates between two types of data: data from fixed and mobile platforms. The VDT data is a third type of data.  Note: Must be rescheduled for completion during next sprint. | George  Partially complete 10/14/2013 |
| Install VDT patches. Since we received the initial version of the VDT, one of the input sources has changed. This required a change to the VDT source code to accommodate. Once we verify that the WxDE VDT server will run the previous version of the VDT, we need to update the VDT to the latest version. | Rhian  Completed 10/14/2013 |

# Future Sprints

## Sprint Plans – 10/14/2013

| Sprint Activity | Status |
| --- | --- |
| WxDE Infrastructure Development | |
| [no activities planned] |  |
| User Interface Development | |
| Change the descriptions for the color coded States. I think users will have trouble interpreting these descriptions. Consider using “Data Available”, “Data Restricted”, and “No Data”. | Chuck, scheduled for 10/21/2013 |
| Identify the initial items that should be included on the External Links page. Note that the external links can be easily updated, so the initial links need only be a starting point for the external links. | Bobby  Scheduled for 10/21/2013 |
| Develop the External Links Page. | Chuck  Scheduled for 10/21/2013 |
| Add email verification when a user registers. After clicking Save, the user account should be created, giving the user immediate access to the WxDE. The user should also be sent an email that includes a hyperlink that can be used to verify the user’s email address. This email will include a unique identifier that the WxDE will use to identify that the user has verified their email address. The WxDE database will include information about whether each user has verified their email address. | Chuck, in progress, scheduled for 10/21/2013 |
| Implement the User Email Verification Screen. | Chuck, scheduled for 10/21/2013 |
| Identify documentation to include on the WxDE Documents page. | Bobby, scheduled for 10/21/2013 |
| VDT Integration Development | |
| Develop tool to format fixed platform data into VDT format. We will extract fixed platform data from the WxDE for use by the VDT by (a) establishing a WxDE subscription for that data (addressed under WxDE Configuration Changes), (b) obtaining this data from the WxDE subscription area, and (c) re-formatting the data into netCDF format.  ***Note: The VDT does not require quality-checked WxDE data, and the additional latency of waiting for quality checked could impact the timeliness of the data produced by the VDT. We will consider whether other approaches should be used to obtain this data from the WxDE for the VDT.*** | Bryan  Scheduled for 10/21/2013 |
| Develop METAR data collector. The VDT requires METAR data, which the WxDE already obtains. We will determine whether it is easier to re-collect the data or re-use the already collected data and implement the selected approach. | Bryan  Scheduled for 10/21/2013 |
| Develop tool to format METAR data into VDT format. The VDT requires that the METAR data be presented in netCDF format. We will develop routines to re-format the METAR data so that it can be used by the VDT.  ***Note: NCAR has indicated that they have a tool we can use for that.*** | Bobby  Scheduled for 10/21/2013 |
| Develop radar data collector. The VDT requires radar data, which the WxDE does not currently collect. We will develop routines to collect the radar data. | George  Scheduled for 10/21/2013 |
| Develop tool to format radar data into VDT format. If necessary, we will reformat the radar data from its native format to the netCDF format expected by the VDT.  ***Note: We hope to use NCAR tools for this, so this step involves working with NCAR to obtain that tool.*** | Bobby  Scheduled for 10/21/2013 |
| Develop RTMA data collector. The VDT requires RTMA data, which the WxDE does not currently collect. We will develop routines to collect the radar data. | George  Scheduled for 10/21/2013 |
| Enhance the Data Observation Map Page to show VDT data locations in the map display (using a new color). The VDT probe data integrated into the WxDE database should appear in the Data Observation Map in a manner similar to how mobile data appears in that map. | Chuck  Scheduled for 10/21/2013 |
| Enhance the Data Observation Map Page to include VDT data as a third type of data (along with Mobile and Non-mobile). Add a check box and filter the map display based on these check boxes. We plan on treating the VDT data in a manner analogous to the way mobile data is treated, as a separate type of data. This check box will allow the user to include or exclude VDT data from the display. | Chuck  Scheduled for 10/21/2013 |
| Enhance the Data Observation Map Page to show VDT data when a VDT data location dot is clicked on the map. The Data Observation Map displays data when a “dot” on the map is clicked. This should occur for VDT data, also. | Chuck  Scheduled for 10/21/2013 |
| Add required metadata to support new observation types for data generated by the VDT in the VDT probe data outputs. The output produced by the VDT will require definition of new metadata (e.g., for new observation types) to support its inclusion in the WxDE database. The required metadata will be integrated into the WxDE database during this activity. | George  Scheduled for 10/21/2013 |
| Develop WxDE fixed platform data subscription for VDT operations. The VDT operations will rely on fixed platform data obtained from the WxDE database. We anticipate doing this by establishing a WxDE data subscription that extracts the required data and makes it available to users and applications.  ***Note: It may be necessary to develop a different method for accessing the subscription data, rather than relying on the subscription ftp space. If so, that method will be designed and developed as part of this activity.*** | Bryan  Scheduled for 10/21/2013 |

## Sprint Plans – 10/21/2013

| Sprint Activity | Status |
| --- | --- |
| WxDE Infrastructure Development | |
| [no activities planned] |  |
| User Interface Development | |
| Update the Latest News list to contain valid entries.  ***Waiting for approved entries to add to the Latest News list.*** | Bobby, scheduled for 10/28/2013 |
| Develop the Sensors Metadata Page. | Chuck, scheduled for 10/28/2013 |
| Develop the Observation Types Metadata Page. | Chuck, scheduled for 10/28/2013 |
| Develop the Observation Value List Metadata Page. | Chuck, scheduled for 10/28/2013 |
| VDT Integration Development | |
| Develop tool to process VDT probe data outputs and present to the WxDE for ingestion. The VDT prepares four output files: (1) VDT output that includes enhanced probe data, (2) road segment statistics data summarizing data along road segments, (3) segment assessment data summarizing road conditions for pre-defined segments, and (4) grid statistics data summarizing data for geographic grids. During Phase 1, the VDT Wrapper will process the VDT output file and insert it into the WxDE database. | George  Scheduled for 10/28/2013 |
| Develop software to schedule and manage the VDT runs. The VDT is a batch process that is initiated through a batch script and a series of configuration and data files. The VDT wrapper will include methods to schedule the data collection and preparation activities, prepare the appropriate batch script, run the batch script, and process the resulting VDT outputs. | George  Scheduled for 10/28/2013 |
| Test the software that schedules and manages the VDT runs and presents VDT probe data to the WxDE. | George  Scheduled for 10/28/2013 |
| Update the WxDE FAQ sections to include elements related to the VDT and how it is integrated with the WxDE. | Cara / Bobby  Scheduled for 10/28/2013 |
| Update the WxDE FAQ “how to” sections to reflect changes made to the WxDE UI to accommodate the VDT integration. | Cara / Bobby  Scheduled for 10/28/2013 |

## Sprint Plans – After 10/21/2013

| Sprint Activity | Status |
| --- | --- |
| WxDE Infrastructure Development | |
| [no activities planned] |  |
| User Interface Development | |
| Develop the Sensors Metadata Page. | Chuck, schedule TBD |
| Develop the Observation Types Metadata Page. | Chuck, schedule TBD |
| Develop the Observation Value List Metadata Page. | Chuck, schedule TBD |
| Review the metadata to determine if other metadata pages are required. | Bobby, scheduled for 11/4/2013 |
| Lock the Section item information and display it in a different format so the user will understand that this item cannot be edited. Also, move this to either the top or bottom of the list of items (so editable items are not intermixed with non-editable items). | Chuck, schedule TBD |
| Update Terms of Use Page once USDOT public affairs review is completed. | Chuck, schedule TBD |
| The Submit button should complete the Retrieve Account Information Wizard by sending an appropriate email to the user. This button currently returns the user to Step 1. It should complete the wizard action. | Chuck, in progress, schedule TBD |
| VDT Integration Development | |
| [activities will be identified when Phase 2 plans are developed] |  |

# Completed Sprints

## Sprint – 9/30/2013

| Sprint Activity | Status |
| --- | --- |
| WxDE Infrastructure Development | |
| Develop hot-start capability. The WxDE uses in-memory data buffers to support the map display and data quality checks. When the WxDE is re-started, these in-memory buffers are empty. This capability will pre-load the in-memory buffers from the database when the WxDE is started to reduce service degradation caused by a re-start. | Bryan / George  Completed 10/3/2013 |
| Test hot-start capability. Install hot-start capability on the Demonstration Instance and have Brenda and Chris test these capabilities.  ***Note: Tests completed satisfactorily. There was a recommendation for a future enhancement so that a user with Super User privileges could access all data via the query interface.*** | George / Brenda  Completed 10/4/2013 |
| Get approval from USDOT public affairs for the WxDE description text.  ***Note: WxDE text was submitted to USDOT public affairs for review. Waiting on approval.*** | Bobby, completed for 10/7/2013 |
| User Interface Development | |
| Add Admin menu options to the WxDE. The need for an Admin menu option was identified in late September. This option should be immediately to the left of the Login option and only available to users logged in with Super User privileges. | Chuck  Completed 10/7/2013 |
| Remove the hyperlink on the word “demonstration”. This link currently goes to the Observation Data Map, zoomed out to show CONUS, Alaska, and Hawaii.  ***Note: This hyperlink is used by developers during testing. Rather than having this back-door approach to zooming to the entire CONUS, add a CONUS entry in the Observation Map Page re-center drop down box to support this.*** | Chuck, scheduled for 10/14/2013 |
| Create documents. Create the User Interface Development document template and begin to create User Interface Development documents. | Bobby  Completed 9/16/2013 |
| Create documents. Create the VDT Integration Development document template and begin to create VDT Integration Development documents. | Bobby  Completed 9/23/2013 |
| Develop the WxDE Documents page. This page simply lists documents from a directory and allows a user to view a selected document. | Chuck  Completed 10/7/2013 |
| Develop Terms of Use Page. | Chuck  Completed 10/4/2013 |
| Re-center map feature not working. (Reported by Brenda). | Chuck, corrected 10/2/2013 |
| The Select Data to Show feature is not available for use on some browsers. (Reported by Brenda.) | Chuck, corrected 10/2/2013 |
| VDT Integration Development | |
| Develop tool to format RTMA data into VDT format. If necessary, we will reformat the RTMA data from its native format to the netCDF format expected by the VDT.  ***Note: Verified that no reformatting is required – the RTMA data from the Website is in the correct format. We may want to use the more detailed 2.5-km version of the file.*** | Bobby  Completed 10/4/2013 |
| Update the WxDE database to accommodate additional IMO data required by the VDT, but not currently stored in the WxDE database. The WxDE already process IMO data. However, it does not include all IMO data in the WxDE database. We will review the VDT inputs to identify IMO data fields required by the VDT but not currently available from the WxDE and update the WxDE database to accommodate those changes.  ***Note: Reviewed VDT requirements versus WxDE database and determined no changes are required – the IMO data is compatible with the WxDE database design. We will need to add metadata for new observation types.*** | George / Bobby  Completed 10/7/2013 |
| Install and test VDT software on the VDT server. We will install and test the VDT software on the specific server that will be used to support the VDT as part of the WxDE Production Instance. The biggest concern is that we are using a different operating system than the one used by NCAR. We do not want to introduce a new OS into the WxDE environment, so need to verify that the VDT will operate under the WxDE environment OS.  ***Note: We had troubles compiling the software under the Ubuntu OS, though the software compiled under Debian run under Ubuntu. We will use this approach to generate the VDT executable needed for the WxDE-VDT integration.*** | Rhian / George  Completed 10/3/2013 |

## Sprint – 9/23/2013

| Sprint Activity | Status |
| --- | --- |
| WxDE Infrastructure Development | |
| WxDE hot-start. The WxDE buffers recent observations on an in-memory buffer. When re-started, the WxDE does not re-load this buffer from the database, so the map display and duplicate checking (which rely on the in-memory buffer) offer diminished functionality until new observations fill the buffer. This activity will load the in-memory buffer from the database when the WxDE starts so no (or little) loss of functionality occurs when the WxDE is restarted. This is particularly important for the WxDE as the Agile process anticipates relatively frequent restarts to deploy software enhancements.  ***Note: Began coding hot-start capability. On target for completing in early October.*** | Bryan / George  In progress. Scheduled for early October |
| Triage data. Identified observation types that can be added to existing platforms to allow data collection of addition observations from those platforms. Implemented changes to the metadata to support additional observation types for existing platforms.  ***Note: We added about 4,100 missing sensors to existing platforms. We do not plan on addressing missing platforms until after WxDE 1.0 is released.*** | Bryan / George  Completed |
| User Interface Development | |
| Change the font color for the word “Environment” in the small header to gold (to match large header). | Chuck, completed 9/25/2013 |
| Change the small footer to be identical to the large footer. | Chuck, completed 9/25/2013 |
| Correct login errors that occur on some browsers. With some browsers, the User Name field in the Login Screen is auto-filled with the user’s email address after completing the Registration Screen. | Chuck, completed 9/25/2013 |
| Lock the Section item information and display it in a different format so the user will understand that this item cannot be edited. Also, move this to either the top or bottom of the list of items (so editable items are not intermixed with non-editable items). | Chuck, completed 9/25/2013 |
| Auto fill the name and business email and prevent editing of these fields for a registered user. | Chuck, completed 9/25/2013 |
| Correct the Submit Feedback button. The Submit Feedback button doesn’t seem to do anything. | Chuck, completed 9/25/2013 |
| Correct the hidden text in the information displayed at the left. The top part of the text in the Saving the Query Results area is hidden in the Contributor Query Wizard. | Chuck, completed 9/25/2013 |
| Correct the text overflowing from the “Display the Results for Saving” pseudo-button in the Contributor Query Wizard. The text flows outside the button area. | Chuck, completed 9/25/2013 |
| Correct the hidden up-down scrollbar in the data display in the Contributor Query Wizard.. The top rows of the resulting data and the scrollbar are hidden by the header. | Chuck, completed 9/25/2013 |
| Change references to “station” in step 2 of the Contributor Query Wizard to “platform”. | Chuck, completed 9/25/2013 |
| VDT Integration Development | |
| Create VDT wrapper project. We will create a separate project for the VDT wrapper software. We need to create that project and import standard libraries we will need to use in it. | George  Completed 9/25/2013 |
| Integrate netCDF capabilities into VDT wrapper project. The VDT relies on netCDF files for input and output. We need to include this functionality in the VDT wrapper. | George  Completed 9/25/2013 |
| Prepare VDT road segment data. We need to prepare a VDT road segment file for use by the WxDE VDT instance. We will start with the MN roads file already prepared by VDT.  ***Note: Verified that current MN roads file is sufficient to support WxDE-VDT.*** | Bobby  Completed 9/25/2013 |
| Prepare VDT climatology quality check data. We need to prepare a file containing configuration values for the climatology quality checks. We will use the same values provided by NCAR for VDT testing (which might be different from those used by WxDE).  ***Note: Verified that current climatology data is sufficient to support WxDE-VDT.*** | Bobby  Completed 9/25/2013 |

## Sprint– 9/16/2013

| Sprint Activity | Status |
| --- | --- |
| WxDE Infrastructure Development | |
| Establish Demonstration Instance. We established a Demonstration Instance, which is used to allow USDOT and WxDE stakeholders to view WxDE changes before moving them to the production instance. | George, completed 9/18/2013 |
| WxDE hot-start. The WxDE buffers recent observations on an in-memory buffer. When re-started, the WxDE does not re-load this buffer from the database, so the map display and duplicate checking (which rely on the in-memory buffer) offer diminished functionality until new observations fill the buffer. This activity will load the in-memory buffer from the database when the WxDE starts so no (or little) loss of functionality occurs when the WxDE is restarted. This is particularly important for the WxDE as the Agile process anticipates relatively frequent restarts to deploy software enhancements. | Bryan / George  In progress. Scheduled for early October |
| Triage data. Identified observation types that can be added to existing platforms to allow data collection of addition observations from those platforms. Will implement changes to metadata and ingest triage data.  ***Note: We do not plan on addressing missing platform data until after WxDE 1.0 is released.*** | Bryan / George  In progress. Scheduled for early October |
| Implement email capabilities in the WxDE. The last step in this wizard requires sending an email to the user with information needed to log in to the WxDE. The WxDE needs to include a method that will send email to a user. | George, coded 9/18/2013 |
| User Interface Development | |
| Eliminate the overlap between the “Weather Data Environment” text and the FHWA logo line in the header. | Chuck  Completed 9/18/2013. |
| Correct the following broken links in the footer: Privacy Policy, Freedom of Information Act (FOIA), Accessibility, and Web Policies and Notices. | Chuck, completed 9/18/2013. |
| Correct the Federal Highway Administration link in the footer. It currently points to the WxDE, not the FHWA web site. | Chuck, completed 9/18/2013. |
| Move the text box so Hawaii is visible.  ***Note: Hawaii is not on the map. Discussed with USDOT and decided that was acceptable, so long as we do not have data from Hawaii.*** | Chuck, Deployed 9/18/2013 |
| The Login menu item is incorrectly active at times. The following actions generate this error. Go to Home Page. Select Data – Observations. Log in. Click the browser back button (i.e., abandon the data query). The Login menu option is still available.  ***This is not an error – this is the expected behavior.*** | Chuck, Deployed 9/18/2013. |
| Add the standard WxDE small header and footer to the page. | Chuck, completed 9/18/2013 |
| Include the WxDE menu bar on the page. | Chuck, completed 9/18/2013 |
| Eliminate the Home hyperlink from the map display. This functionality is replaced with the menu bar. | Chuck, completed 9/18/2013 |
| Correct Register button action. The Register button does not access the Registration Page. | Chuck, completed 9/18/2013 |
| Remove potential PII references. Change “Email:” the “Business Email:”. Remove “Individual” from the Organization Type list. | Chuck, completed 9/18/2013 |
| Correct Save button. The Save button does not work – it shows the error message “The requested resource is not available”. | Chuck, completed 9/18/2013 |
| Make the step 4 screen of the Contributor Query Wizard fit the new WxDE look-and-feel. | Chuck, coded 9/18/2013 |
| Make the step 5 screen of the Contributor Query Wizard fit the new WxDE look-and-feel. | Chuck, coded 9/18/2013 |
| Make step 4 of the Contributor Subscription Wizard screen fit the new WxDE look-and-feel. | Chuck, coded 9/18/2013 |
| Eliminate the Contact Email and Contact Name fields from the Contributor Subscription Wizard. Subscriptions can only be created by registered users, so this information is already known. Relate the subscription to the registered user in the WxDE database instead if storing contact info with the subscription definition.  ***Implemented different approach, pre-populating these fields for logged in users.*** | Chuck, coded 9/18/2013 |
| Enable the software to actually create the subscription in the Contributor Subscription Wizard. The software currently fails at this step.  ***Still failed during testing.*** | Chuck, coded 9/18/2013 |
| VDT Integration Development | |
| Prepare VDT road segment data. We need to prepare a VDT road segment file for use by the WxDE VDT instance. We will start with the MN roads file already prepared by VDT.  ***Note: Updated documentation to reflect this approach would be used.*** | Bobby  Completed 9/18/2013 |
| Prepare VDT climatology quality check data. We need to prepare a file containing configuration values for the climatology quality checks. We will use the same values provided by NCAR for VDT testing (which might be different from those used by WxDE).  ***Note: Updated documentation to reflect this approach would be used.*** | Bobby  Completed 9/18/2013 |