VDV Burst Data

8/13/2015

[VDV Burst Data main features and license structure]
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1. Introduction

VDV Burst Data is a new addition to the Vista Data Vision software. VDV Burst Data allows to import high speed dynamic data such as from instruments made by Instantel and Campbell Scientific. The data is imported into the VDV database and can then be viewed with all other data types already supported by VDV.

This new feature will allow users to view in a single web interface instruments such as piezometers, inclinometers, total stations and high speed recorders.

VDV is already a leading software solution in the geotechnical industry and used by many of the largest engineering companies worldwide.
2. Importing Data

VDV Burst Data runs as an application on a local server. It monitors incoming data, both event and background data, and as soon as new data arrives it automatically imports it into the VDV database.

VDV Burst Data currently supports Instantel and Campbell Scientific data files. Additional File formats can be supported.
2.1. Adding New Site

To add a site to VDV Burst Data the user must have at least one event file from the site.

Select Edit->Add Site

Select an event file from the site and enter a Name. It is recommended to enter the Serial Number of the recorder as Name.

When a new Site has been added VDV Burst Data will monitor its location and automatically import new data as it is collected.

Note:

Instantel Waveform Files include W in the file name right before _ASCII.TXT.

Syscom Event Files are located in the Event folder and have .XMR ending.

Owners are created in db.robot.c (Edit->Edit Owner) or online.
Alias Names and Units are automatically read from the file. Possible is to edit the Alias names and Units if needed.

Attribute are created in VDV Burst Data -> Edit -> Sensor Attribute. Attributes are used with data from Campbell SCI dataloggers to identify their location if needed.
3. Project Configuration

A web user can be given access to configure projects and create new projects.

Go to Configurations -> Burst Data -> Edit - Projects

A list of all projects the user has access to. The user can choose to create a new project or edit/delete an existing project.

See next page for project configuration options.
Project configuration options

**General Options**

**Name:** Project Name

**Owner:** The Owner (client) whom the project belongs to. Owners are created in db.robot.c or online.

**Standard:** The standard to use in the project. 
*Standards are created in Configurations -> Burst Data -> Edit Standards*

**Project Number:** A value that can be shown in reports.

**Client:** Client name that can be shown in reports.

**Description:** Project Description that is shown with the project on the web and can also be included in reports.

**Event Alarm**

**Event Alarm:** Check if an alarm email should be sent when new events are detected. Select a Contact Group to send email to.
*Contacts and Contact Groups are created Online under Configurations or in db.robot.c*

**Background Data**

**Auto Reduce Data:** Show data in grouped bins. For example when viewing one month of data just show the maximum value per day rather than showing all data. This greatly improves performance.

**Format:** Display background data values as either a column or point.

**Scale:** Options are either Auto Scale or Auto Scale including Levels. Auto Scale scales the graph only to the background data values, this means that the levels may not be shown.

**Trigger Level:** If selected the trigger level is shown on the graphs.

**Threshold Level:** If selected the threshold level is shown on the graphs.
*Threshold level is the High alarm limit for the variable. Alarms are configured online under Alarms -> Alarm Setup or in db.robot.c*

**Alarm Level:** If selected the alarm level is shown on the graphs.
*Alarm level is the HighHigh alarm limit for the variable.*
**Webcam**

A webcam that has been defined in VDV can be connected to the project. The photos from the webcam can be shown with an event if the timestamp of the webcam photos is the same as the timestamp of the event +/− the selected range in seconds.

**Range:** The user chooses the webcam range in seconds. For example a selected range value of 60 will for an event that was triggered on "2014-06-01 13:30:03" show all webcam photos that have a timestamp between "2014-06-01 13:29:03" and "2014-06-01 13:31:03".

*Webcam setup is in db.web.browser -> Configure -> Web Site Setup -> Webcam Setup*

**Monitoring Location**

A project can have one or more monitoring locations. Each monitoring location can then have one or more Units assigned to it.

A unit is assigned to a project for a specific duration. This means that when viewing the project the unit will only show data from the selected project start date for the unit and until the selected stop date.

The unit can also have a specific project unit name that can be a more descriptive name.

**Photos**

Photos can be added to a project. The photos can be viewed with the project and they can also be included in reports.

The photo type is used to add photos to specific sections in reports, for example a client logo is used on the report title page.

**Archive**

Projects that are no longer active can be archived rather than deleted if that is preferred.
4. User Access

Users have access to their dynamic vibration data through a web interface. Each user has a unique user name and password that gives him access to his units and Projects. Multiple clients can be managed in a single system and each client can only access his data.

Users can be given access to specific projects or all projects belonging to an Owner.

It is also possible to give a user only access to specific units within a project. Clicking on the Project name will show all units in the project.
5. Viewing Data

VDV Burst Data imports both event and background data and that data can then be easily viewed using a web interface.

5.1. Time Series (Background Data)

This is the default view for VDV Burst Data. The data is organized into projects and the user can switch between projects that he has access to by using the drop down list in the top right corner.

The tabs change between different project information.

When viewing Time Series the user sees one graph per channel. Here the graphs have been configured to show the data as points (columns is also an option) and the graphs have also been configured to show the threshold limit and the alarm limit.

The user can easily change the graph scale and scroll through the data using the arrow buttons at the bottom. If the project is configured with **Auto Reduce Data** then the data is automatically summarized based on the selected scale. For example when viewing long periods such as 6 months the data reduced to show the maximum value every day instead of showing all the raw data that could be stored as fast as every second.

If the Project has multiple units the user can select which unit he wishes to view by using the drop down list in the top right corner. The user also has an option to show all the units simultaneously.
Here the user has selected to show all units simultaneously on the graphs.

By hovering over the plots the user will see a tooltip with information about the plots.
The user has access to a list of all the events that have been triggered. The same options as for the Time Series data are available here. The user can change the scale and scroll the data, the user can also choose to have the table show data from only a specific unit in the project or all units in the project.

For each event the user has the following options:

- **View Event.** This allows the user to see the graph for the event data.
- **Time Series.** Clicking this button will jump to the time series showing the time around the event timestamp.
- **PDF Report.** Shows a summary report for the event.
- **Download.** Saves the event data to a text file.
- **Disable.** Disables the event. Disabled events will not be used in reports.
Here the user has chosen to view an event. The plots show the captured event data. The user can scroll between events by using the arrow buttons in the top left corner. The user can also highlight a section of the graph to zoom in.

View Event in a table format.

Flag the Event. Reports can contain specific Flags.

*Flags are created in VDV Burst Data -> Edit -> Event Category*
The user can choose to view the data in a single graph with the drop down menu in top right corner.
5.3. Frequency Overview

The Frequency Overview shows an overview of all events for a selected time period. The Frequency Overview XY plot also shows the selected Project Standard.
5.4. Project Information

The user can see information related to the project. A project description, list of the Units that are assigned to the project and photos.
5.5. **Report**

Using the web interface users can quickly create project reports. The user can customize the report by choosing different components to include in the report.

The report wizard can greatly reduce the time it takes to create project reports that are then handed to the end client.

Reports can be created on the fly from the web interface or created automatically on a schedule and sent to a contact group.

**Storing report templates**

It is possible to save multiple report templates for a project.

All saved reports for project are shown in the list on the right hand side. Click on a report name to load the template settings. It is possible to update a report or create new reports.
A report can for example have two report templates that are generated on a schedule, where the first might be generated every week and contain a report for the previous week and the second might be generated every month and contain a report for the previous month.

**Title Page & Introduction**

User can choose to have a title page for the report. The contents of the title page can be customized.

The report can contain an introduction. The introduction can have 3 sections, project description, project photos and project map.

**Histogram Data (Time Series)**

The report can include the Histogram/Background data. If the project contains multiple units then each unit can be shown on a separate page.

**Events**

Event Data can be added to the report in several different ways. It is possible to include all events for the report period or only specific events.

The event data can be shown as a time series plot or as a single page compliance report.

**Report Period**

The report can include either all the project data or a specific time period.

The user can select a specific start and stop date for the report period.
It is possible to save a report configuration and create it on a schedule. The report can be sent automatically to a list of contacts.

**Schedule**: Select if the report should be generated automatically.

**Contact Groups**: Select the contact group to email the report to.

**Run Task Every**: Select if the report should be generated every day/week/month.

**Starting Hour**: Select the time of day when the report should be generated (0-23). For a week report it is also possible to select the weekday when the report is generated.

**Include**: Select the time period to include in the report.

**Email Subject**: Text that is used if the report is automatically sent with email.

**Message**: Text that is used in the message body if the report is automatically sent with email.

Both Email Subject and Message can include the following template variables: $PROJECT_NAME$, $NOW$, $REPORT_PERIOD$, $REPORT_TITLE$. 

<table>
<thead>
<tr>
<th>VDV Report - $PROJECT_NAME$ ($REPORT_PERIOD$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message</td>
</tr>
<tr>
<td>$PROJECT_NAME$ - $REPORT_TITLE$</td>
</tr>
<tr>
<td>Report Period: $REPORT_PERIOD$</td>
</tr>
<tr>
<td>Generated: $NOW$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VDV Report - My Project (05/20/2015 - 05/26/2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message</td>
</tr>
<tr>
<td>My Project - My Report Name</td>
</tr>
<tr>
<td>Report Period: 05/20/2015 - 05/26/2015</td>
</tr>
<tr>
<td>Generated: 05/26/2015 10:12:01 AM</td>
</tr>
</tbody>
</table>
6. Standards

VDV ships with a few predefined standards but additional standards can be created within VDV. A user can be given access to create standards.

Here the user can choose to create a new standard or edit/delete an existing standard.

**Configuration options**

**Name:** The Standard name.

**Axis**

**Auto:** If the axis should have an auto scale

**Min:** The axis minimum value if Auto scale is not selected.

**Log:** If the axis should be displayed as Log.

**Max:** The axis maximum value if Auto scale is not selected.

**Limits**

**Name:** Limit name.

**XY:** Limit line xy coordinates.

**Width:** Limit line width.

**Color:** Limit line color.

**Line Style:** Style for the limit line. Options are Solid, Dash, Long Dash, Short Dash, Dot, Short Dot.
7. License

VDV Burst Data can be purchased in two different ways.

- Purchased software that runs locally on a company server
- Hosted cloud solution

The license cost for VDV Burst Data is based on the number of unit days. For example if a project runs for 3 months and includes 5 units it will require 450 license days (3*30*5=450).

**VDV Burst Data on a local server**

If VDV Burst Data is purchased and run locally it will also require the full Vista Data Vision software.

When additional days are purchased the purchased day count is added to the current license status.

**VDV Burst Data as a cloud service**

When using the Cloud Service the data is sent to the cloud server using FTP. The data is automatically imported into the VDV database and the client has full web access to his data and configurations.

The client can create limit web users that give access to specific projects and do not have access to any configurations and give these web users to his own end clients.

By using the cloud service the client does not need to run his own office server or his own web service.