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Interail Data Integration

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Overview

- Key software components
 - Data logging software
 - Operating system
 - Control & caching
 - Database
 - Event display software
 - Office-based
 - Trackside



Onboard Platform

- Fanless, 2.26 GHz Core 2 Duo
- Built-in GPS and 3G
 - Near-live transmission of event data to database
 - Transmission time is coverage dependent
- EN50155 / EN50121 compliant
- 12 – 32V DC, OVP / UVP
- 2 x 1000Mbps Eth. (M12)



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Operating System

- Customized OS for the system
 - Derived from Slackware 13
 - Low overheads, no swapfile
 - SDD
 - Contains all the kernel drivers for the more “unusual” hardware elements
 - 3G drivers etc.
- Targeting a single disk automated install

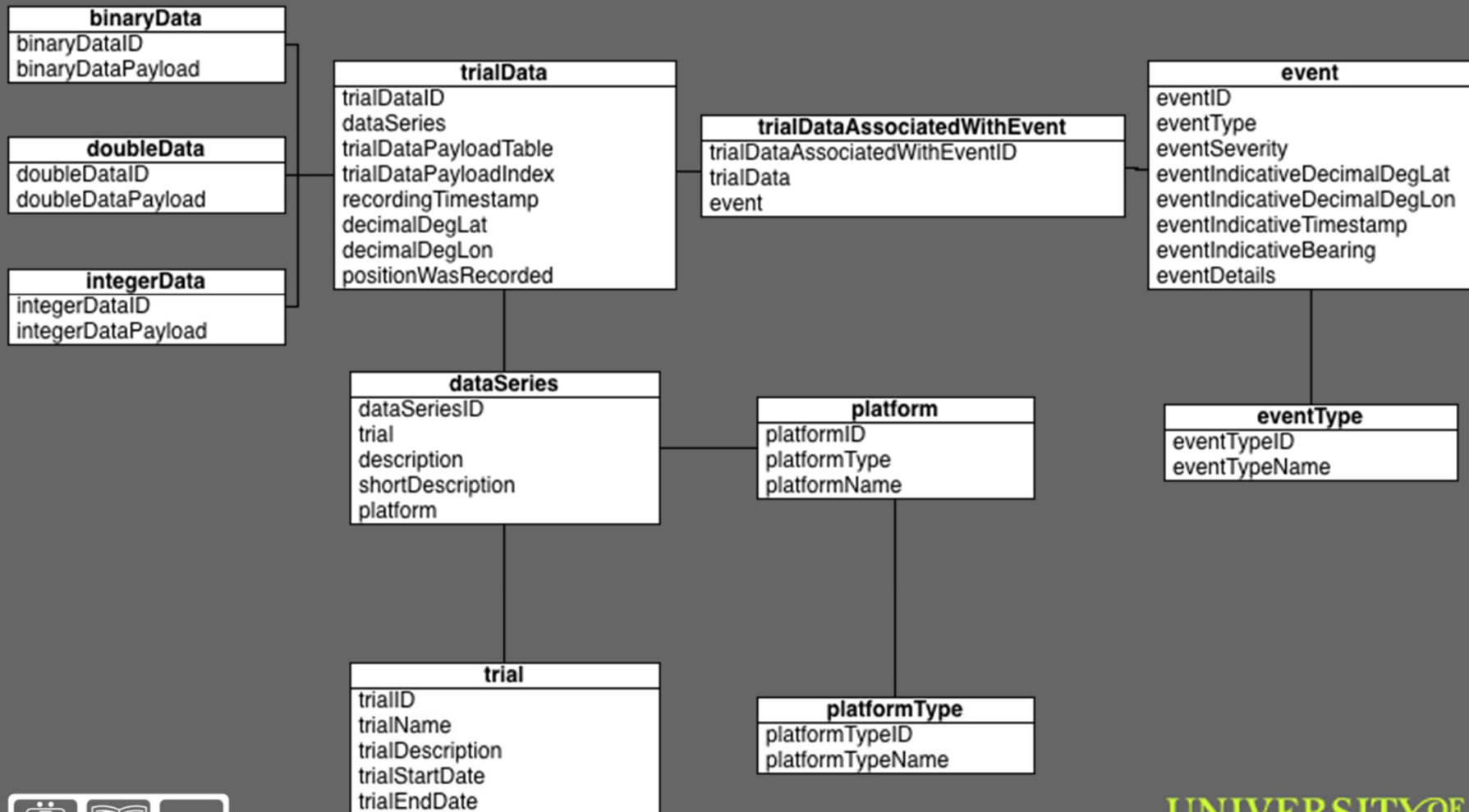


Why?

- Gather information needed to integrate other data
 - GPS immediately above the sled
 - Speed & bearing
 - EM120 position / time
 - Run times
- Monitoring the ACFM sled lift-off and temperature



Database



Main Role

- Presentation-layer friendly store for inspection data
 - Not necessarily good for further processing work!
- Data tagged with positions and timestamps
- Data “integrated” upon loading into the database
 - Once everything has common timings and positions you can present any combination needed



Reporting

- 3 methods
 - Online defect viewer
 - Exportable paper reports
 - Tablet app
- All use clusters to reduce complexity



Online Defect Viewer

InterRail Event Data Viewer

Map Satellite Hybrid

Map data ©2013 Google, basado en BCN IGN España - [Terms of Use](#)

Event Selection

Start Date (Inclusive)							End Date (Exclusive)						
<< < March, 2013 > >>							<< < March, 2013 > >>						
Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
25	26	27	28	1	2	3	25	26	27	28	1	2	3
4	5	6	7	8	9	10	4	5	6	7	8	9	10
11	12	13	14	15	16	17	11	12	13	14	15	16	17
18	19	20	21	22	23	24	18	19	20	21	22	23	24
25	26	27	28	29	30	31	25	26	27	28	29	30	31
1	2	3	4	5	6	7	1	2	3	4	5	6	7

Event Area Limits

No limits set.

Edit Limits

Available Events

Cluster event type	Cluster average severity ↕	Cluster size ↕
UT Amplitude Alarm	low	50
UT Amplitude Alarm	substantial	3
UT Amplitude Alarm	substantial	14
UT Amplitude Alarm	substantial	25
UT Amplitude Alarm	substantial	8

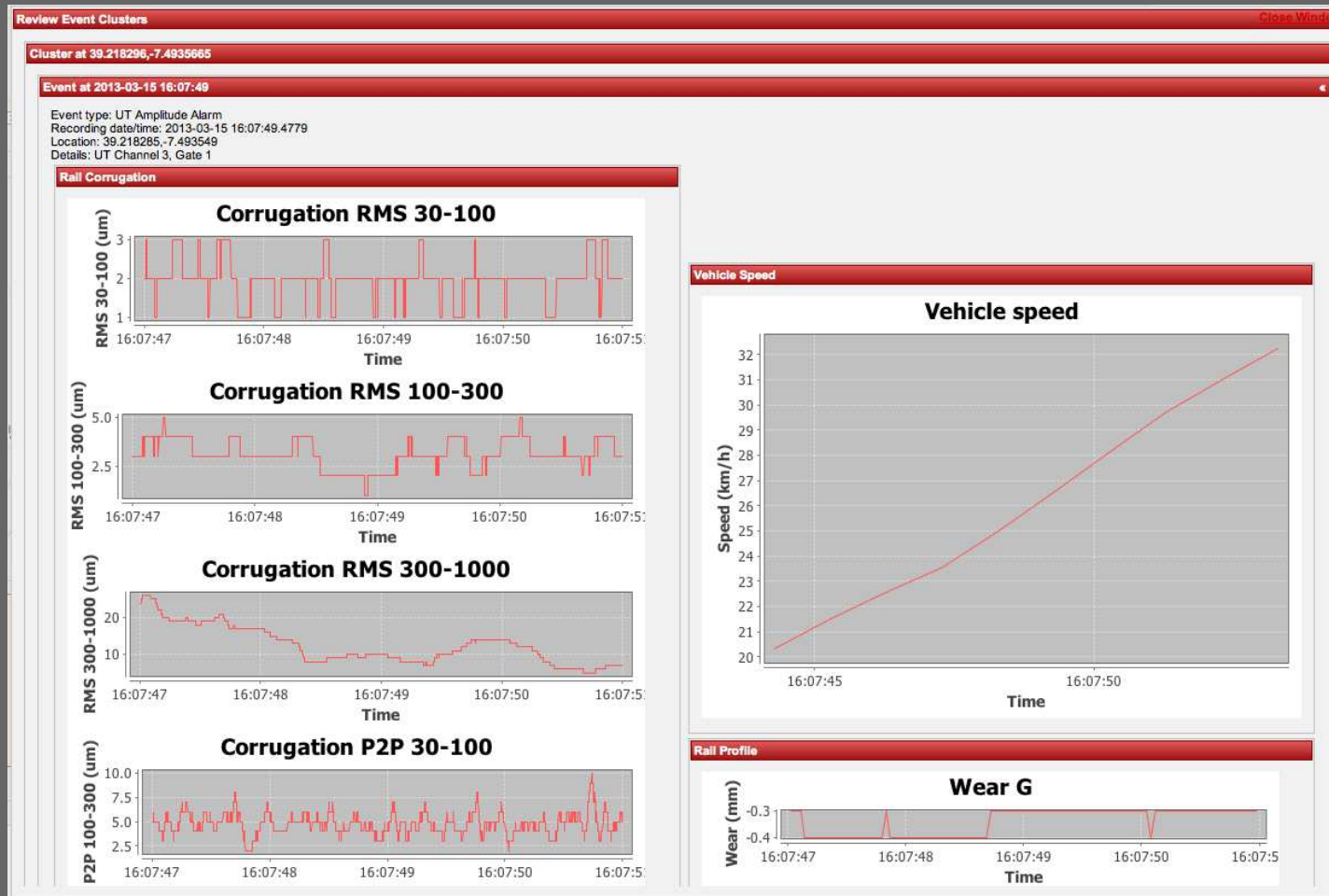
Export Event Clusters

To export a summary of the clusters selected (or all available clusters if none selected) please click the button below.

Export Selected Event Clusters



More Info.

Online Defect Viewer



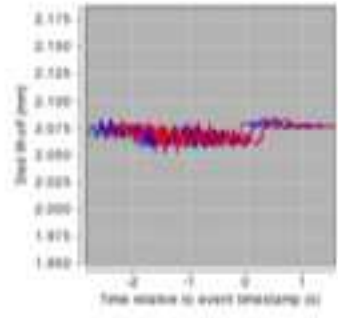
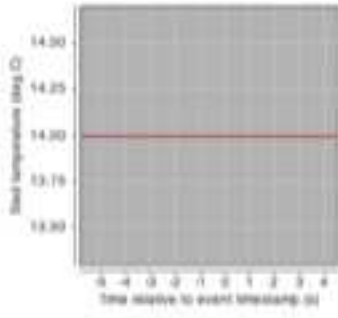
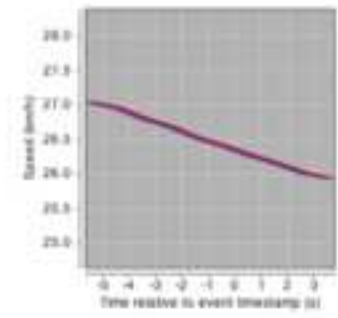

PDF Report Generation

Approx position: (30.462236, -8.365703)
 Cluster type: Vision System - Fastener Problem
 Cluster grade: severe
 Number of events in cluster: 5
 Likely cause: unknown

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Mobile (Tablet) Defect Viewer



Questions?



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