



The NHWC Transmission

March 2016

CONTENTS

ALERT Base Stations	1
ALERT Users Group	2
NHWC 2017	3
US Hydrologic Conditions	3
Calendar of Events	4
April Focus	4
Parting Shot	4

Click on hyperlinks located throughout this newsletter for more information.

NHWC 2015-17 Officers and Directors

Steve Fitzgerald

President
Harris County FCD

Joshua McSwain

Vice President
Charlotte-Mecklenburg
Stormwater Services

Brad Heilwagen

Secretary
Amec Foster Wheeler

Chris Crompton

Treasurer
County of Orange

David Curtis

Past President
WEST Consultants, Inc.

Bruce Rindahl

AUG Representative
Ventura County Watershed
Protection District

Directors At-Large

Ben Pratt

Susquehanna River Basin
Commission

Andrew Rooke

AMR Consults, LLC

Kevin Stewart

Urban Drainage and FCD



Designing and Managing ALERT Base Stations in Today's Network Environments

Brian Iserman, JE Fuller
NHWC Editor

Today's computer network environments present many challenges and opportunities for those tasked with maintaining a high availability ALERT base station. In the old days, our ALERT base stations tended to be stand-alone work stations with proprietary databases that were designed to provide high availability and reliability within a relatively simple network environment. Redundancy was achieved by running one or more physical workstations with routines that synced the databases. Real-time ALERT telemetry data were fed to these work stations by directly connected serial decoders.

Stand-alone workstations and servers are still a good option, however we are increasingly seeing agencies opt for designs which rely on databases, GIS resources and web services which are distributed across networks and managed by the central data collection software. With such distributed architecture, a new set of best practices is needed.

In this short article, I would like to highlight one practice that will help your organization to ensure the health and reliability of your ALERT base station operated in a stand-alone or distributed network environment.

Documentation

Because distributed base stations are complicated, it takes a team of IT specialists to keep each network environment resource on which the base station depends on running reliably. To help keep the team's efforts coordinated, thorough on-going documentation is crucial. Good documentation also provides a means by which sudden system failures may be quickly diagnosed and rectified.

We have found two tools in particular which provide helpful ways to keep track of all system information; these include Microsoft OneNote and Visio. While there are other suitable brands of applications that serve similar functions, we have found that IT staff, many of whom have Microsoft certifications, tend to be most familiar with Microsoft versions of these applications and already have access to them.

OneNote, essentially an electronic notebook, provides a means of syncing notes from all project team members. In the past, we used physical notebooks to keep track of system settings, maintenance logs, updates, access instructions and to-do lists. This was a good system when there was only 2 of us involved with managing a handful of ALERT base station servers. However, the first time both of us needed access to the physical notebook from two physical locations, we quickly saw the need for a better way to track our information and share it easily with others.

Evernote is another such application that should be considered and one which we used for a short time. However, once our organization began 

subscribing to Microsoft 365 (subscription based software plus services), we had access to OneNote as part of the software services. Evernote does have a free version, but it is limited to personal use and does not allow for sharing by a collaborative team. If your organization is not already paying for OneNote, then it would be worth comparing the features and functionality of Evernote.

Visio is Microsoft's diagramming and vector graphics application. It can be used to produce detailed schematics of the overall layout of

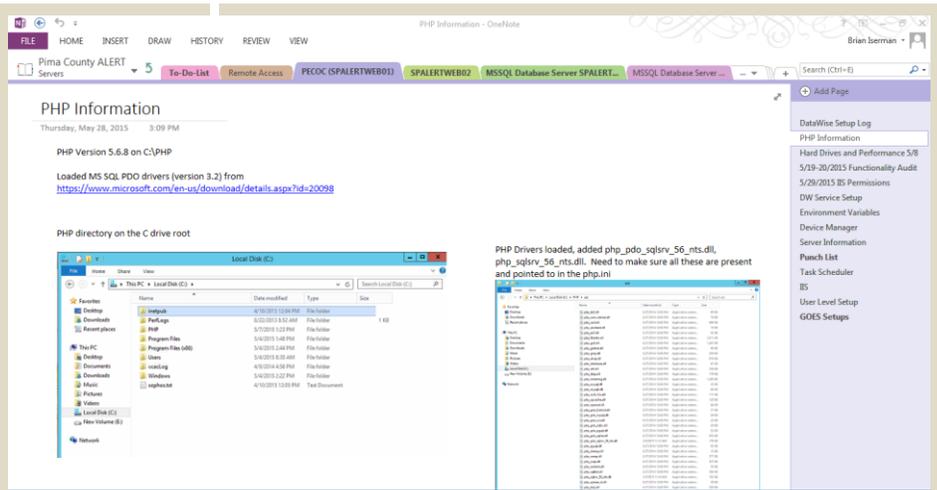


Figure 1 - Microsoft OneNote notebook for an ALERT Base station server located on a distributed network.

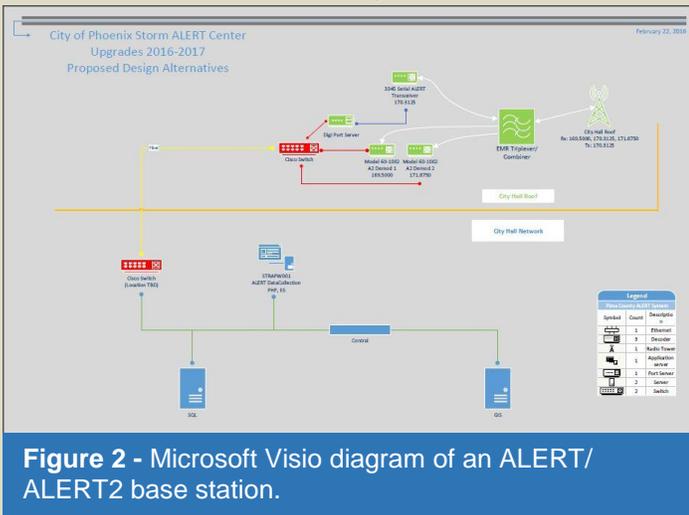
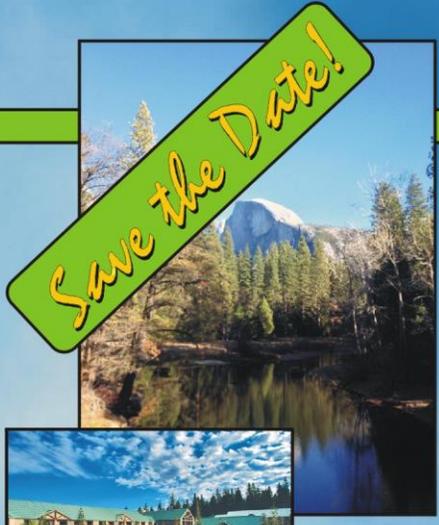


Figure 2 - Microsoft Visio diagram of an ALERT/ALERT2 base station.

the various distributed components of an ALERT base station. Figure 2 shows a complete ALERT/ALERT2 base station.

Visio is easy to learn and it includes symbol libraries for depicting networks/processes for a variety of systems. Detailed attributes, such as equipment manufacturer, model, IP address etc.... are linked to network symbols using an intuitive user interface.

Such documentation is eagerly received and integrated into design and management processes by IT teams we work with. This leads to increased trust and information flow among the team and a reliable ALERT base station.



26th ALERT Users Group

Training Symposium & Preparedness Workshops

April 18-22, 2016



Tenaya Lodge at Yosemite
Fish Camp, CA

<http://www.alertsystems.org>

Save the Date

2017 National Hydrologic Warning Council Training Conference & Exposition

June 5-8, 2017
Squaw Valley, California

The 2017 NHWC Training Conference & Exposition will be held on June 5-8, 2017 at the Resort at Squaw Creek near Olympic Valley, California

Watch this [link](#) for more information and updates.

Membership Renewal

It's not too late to join or renew your Annual NHWC Membership. New members are welcome. Click [here](#) to join/renew your membership.

2016 Critical Infrastructure Symposium

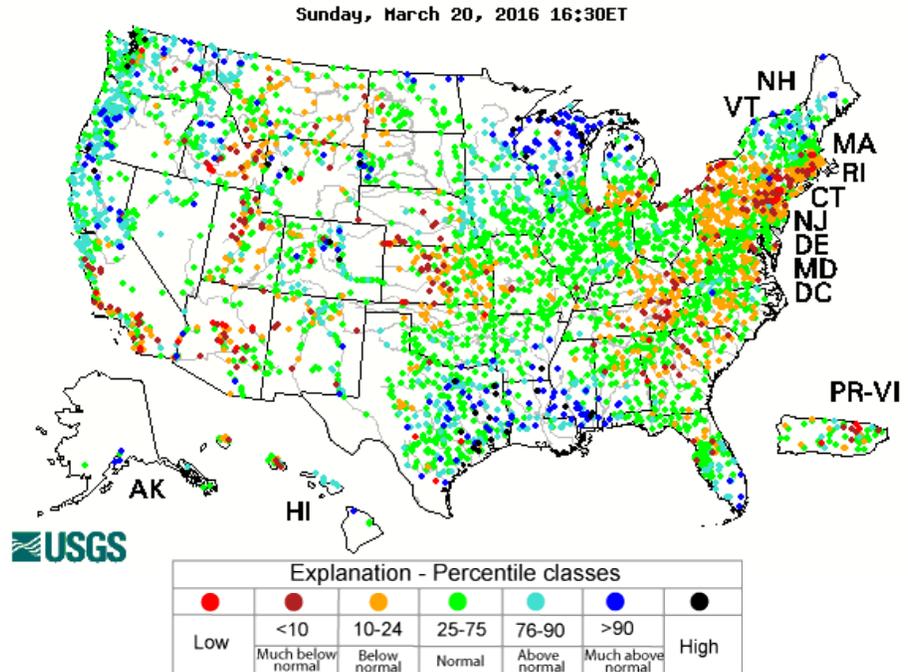
The 2016 Critical Infrastructure Symposium is sponsored by the Society of American Military Engineers (SAME) on April 3rd-5th, 2016 at the Charleston Marriott in Charleston, South Carolina.

www.same.org/tisp

Contact: Jacqueline Barrett
TISP Program Coordinator
Society of American Military Engineers

jbarrett@same.org

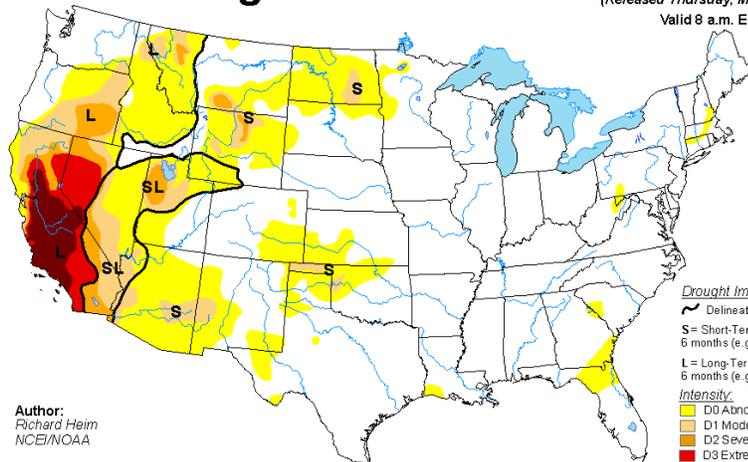
Hydrologic Conditions in the United States Through March 20, 2016



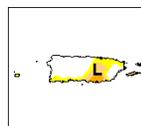
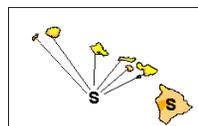
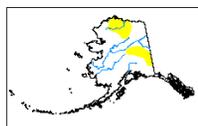
Latest stream flow conditions in the United States. (courtesy USGS)

U.S. Drought Monitor

March 15, 2016
(Released Thursday, Mar. 17, 2016)
Valid 8 a.m. EDT



Author:
Richard Heim
NCEI/NOAA



<http://droughtmonitor.unl.edu/>

Latest drought conditions in the United States. (courtesy National Drought Mitigation Center)

April Newsletter Articles Focus: Hazard Communication & Public Awareness

NHWC is requesting articles that focus on getting the word out.

Please prepare an article that explains how your organization gets the right real-time data and information to the right people for the right response.

Submit your article to:

editor@hydrologicwarning.org

April 8th is the deadline for inclusion in the April issue.

Future Newsletter Articles Focus

To give you more time to prepare articles, below is the article focus schedule for the next four months:

**Apr - Hazard
Communication &
Public Awareness**
May - Modeling/Analysis
Jun - Data Collection
Jul - Hydrology

NHWC Calendar

September 20-21, 2016 - [NHWC Northeast Regional Workshop](#), Albany, New York

June 5-8, 2017 – [NHWC 2017 Training Conference & Exposition](#), Squaw Valley, California

General Interest Calendar

April 3-5, 2016 - [2016 Critical Infrastructure Symposium](#), Charleston, South Carolina

April 18-22, 2016 - [ALERT Users Group Training Symposium and Preparedness Workshop](#), Tenaya Lodge at Yosemite National Park, California

June 19-24, 2016 - [ASFPM 2016 40th Annual National Conference](#), Grand Rapids, Michigan.

(see the [event calendar](#) on the NHWC website for more information)

Parting Shot

New ALERT station in Santa Cruz County, Arizona



This ALERT precipitation and radar stage station was installed for Santa Cruz County on January 12, 2016 on the Santa Cruz River at State Highway 82 near Nogales, Arizona.

Photo by Tyler Azeltine, JE Fuller

National Hydrologic Warning Council

*Providing Timely, Quality Hydrologic Information to Protect Lives,
Property, and the Environment*

<http://www.hydrologicwarning.org>