ALERT2 Technical Working Group

**Meeting Minutes**

**June 5, 2017 – 5 PM (PDT)**

**Castle Peak Room, Resort at Squaw Creek, Lake Tahoe, CA**

1. **Call to Order**
   1. Steve Fitzgerald (NHWC President) made brief introductory remarks.
   2. David Haynes called the meeting to order at 5pm.
   3. Attendance:
      1. **David Haynes (Distinctive AFWS Designs, Inc.)\***
      2. **Robert Thompson (Australian Bureau of Meteorology)\***
      3. Ken Conner (Campbell Scientific)
      4. **Don Van Wie (Telos Services)**
      5. **Mark Moore (Harris County Flood Control District)**
      6. **Brian Iserman (JE Fuller)**
      7. **Peter Acton (JE Fuller)**
      8. **Dave Leader (Hydrolynx)**
      9. **Ron Marotto (Ventura County)**
      10. **Jim Slouber (Member at Large)**
      11. **Carrie Lery (High Sierra Electronics, Inc.)**
      12. **Chris Roark (Chris Roark Consulting)**
      13. **David Van Wie (Blue Water Design LLC)**
      14. **Ilse Gayl (OneRain)**
      15. **Steve Malers (TriLynks Systems)**
      16. **Markus Ritsch (TriLynks Systems)**
      17. Jean Vieux (Vieux and Associates)
      18. Baxter Vieux (Vieux and Associates)
      19. **Adam Torgerson (Blue Water Design LLC)**
      20. Mike Nelson (Campbell Scientific)

\* These members joined remotely via GoToMeeting.

Names in **bold** are ALERT2 TWG members.

Members not present include Sam Utley, Andy Morin, Dan Hurley, Scott Holder

1. **Scribe Designation**

Brian Iserman

1. **New Members**
   1. The ALERT2 TWG voted unanimously to approve the following new members to the TWG:
      1. Mark Moore
      2. David Van Wie
      3. Adam Torgerson
      4. Peter Acton
2. **Sub-Group Activity Review**

Members gave brief summaries of discussion items to follow.

1. **Chair Election**

David Haynes was elected by unanimous vote to a second term as chair of the ALERT2 TWG.

1. **Document Management Summary (Markus Ritsch, Brian Iserman, Steve Malers)**

Brian, Markus and Steve provided an overview of the options for managing documents and a demonstration of how documents can be organized and accessed using the NHWC website. There was consensus among the TWG members that version management/control is needed along with “forums” or a way to track discussion threads associated with the various versions of the components of the ALERT2 standard documentation. The preferred solution will probably be a combination of using GitHub for version management/document control and forums, and the NHWC document portal feature to store/publish final versions and draft versions published for public review. The group (Brian, David Van Wie, Adam, Markus, Steve and Peter) will do a little more research to test this concept to make sure it will work for the purposes of the ALERT2 TWG and to provide a schedule to for next steps to the TWG by June 20th, 2017.

1. **ALERT2 Application Layer Data Types Proposal**

Sam Utley was scheduled to lead this discussion, but was not able to make the meeting. Chris emphasized that this proposal represents an important and much-needed improvement. The proposal is attached at the end of these minutes.

**Action Item:**

The proposal (Attachment 1) is open for review by members of the ALERT2 TWG for 30 days ending **Friday, July 7th, 2017.**

1. **ALERT2 over IP (James Logan)**

James lead the discussion. Rob requested that the proposal include allowing UDP data broadcasting along with TCP socket connections.

**Action Item:**

The proposal (Attachment 2) is open for review by members of the ALERT2 TWG for 2 weeks ending **Tuesday, June 20, 2017.**

1. **Time Series Data Format Proposal (David Haynes)**

There was brief discussion and a note about an error involving reference to fields, which David has noted and will correct.

**Action item:**

The proposal (Attachment 3) is open for review by members of the ALERT2 TWG for 30 days ending **Friday, July 7th, 2017**

1. **ALERT2 High Data Rate Proposal (David Van Wie) 6:07pm**

David gave an overview of the proposal noting the purpose is to maximize reliability of ALERT2 and increase the band width. He noted that the only drawback is a slight loss of radio energy gain (in the range of 2 to 3 dB). After some discussion, it was noted that this could be a user-selectable option to invoke should higher gain be desired over band width. There was consensus that this would be an important addition to ALERT2.

**Action Item:**

The proposal (Attachment 4) is open for review by members of the ALERT2 TWG for 30 days ending **Friday, July 7th, 2017**.

1. **Data Encryption Activities (proposal by Sam Utley)**
2. **ALERT2 Authentication and Encryption Proposal (James Logan, David Van Wie, Chris Roark)**

These two items were discussed together because it dawned on the group that it would be counter-productive to develop these two activities separately without coordination. It was emphasized that these two proposed operations might reside on different layers, but there is some uncertainty as to the possibility of combining these activities/applications. Rob suggested developing a matrix starting with the requirements (e.g., existing federal requirements) or objectives that are desired and then progress toward solutions that may be more or less integrated. Rob volunteered to help put the matrix together based on comments received by the group over the next 2 weeks.

**Action Item:**

The proposals (Attachments 5 and 6) are open for review by members of the ALERT2 TWG. Please provide comments to the ALERT2 TWG, especially including Rob, for the Requirements/Objectives Matrix by **Tuesday, June 20, 2017**.

1. **End-to-End Reliable Datagram Service Updates (David Van Wie) 7:19pm**

Much of the discussion seemed to boil down to the possibility of making slots available for high-priority communications and how this might be accomplished inside TDMA. This may be realized through more efficient use of bandwidth…getting back to Item 10 above. David Van Wie and Adam will aggregate comments received.

**Action Item:**

The proposal (Attachment 7) is open for review by members of the ALERT2 TWG. Please provide comments to the ALERT2 TWG, especially including David and Adam by

**Friday, June 30, 2017**.

1. **OEM Compliance to ALERT2 Standards (Robert Thompson) 7:44pm**

Rob emphasized that he is proposing to simply first lay out a vision in a discussion paper; including standards/enforcement for interoperability of various manufacturers’ equipment (even outside the non-flood warning community), utilization of API’s or services that check for version compatibility of equipment/devices – a list that can be queried etc… Rob noted that this crosses over into, and is related to, the document management discussion (Item 6). Carrie has been working on a proposal that is also related to this for querying the application layer. So, Carrie and Rob will be involved in this effort and will coordinate with the Document Management group (Steve, Markus, David Van Wie, Adam, Brian, Peter).

The proposal (Attachment 8) is open for review by members of the ALERT2 TWG. Please provide comments to the ALERT2 TWG, especially including Robert, by **Friday, June 30, 2017**.

1. **Best Practices (Don Van Wie)**

Don and Carrie are working on a document to answer the question: How to enforce compliance to best practices e.g., getting a gps sync request on request – i.e., Best practices for end users on system implementation. Don emphasized the need for documentation/training for system management and design. Don and Carrie will freshen up their document after they receive additional feature-wish items from TWG members.

**Action Item:**

ALERT2 TWG members have 30 days to provide best practice features they would like to see documented and made available for training.

**Friday, July 7th, 2017**.

Meeting adjourned at 8:18pm.

**Attachments**

1. **Data Type Proposal (Comments requested by Friday, July 7, 2017)**
2. **ALERT2 Over IP (Comments requested by Tuesday, June 20, 2017)**
3. **Time Series Data Format Proposal (comments requested by Friday, July 7th, 2017)**
4. **ALERT2 High Data Rate Proposal (Comments requested by Friday, July 7th, 2017)**
5. **ALERT2 Encryption for Self Reporting Protocol (Comments requested by Tuesday, June 20th, 2017)**
6. **ALERT2 Authentication and Encryption Proposal (Comments requested by Tuesday, June 20th, 2017)**
7. **End-to-End Reliable Datagram Service Updates Proposal (Comments requested by Friday, June 30th, 2017)**
8. **OEM Compliance to ALERT2 Standard Proposal (Comments requested by Friday, June 30th, 2017)**