

September 6, 2007

SDI-12 Support Group
165 East 500 South
River Heights, Utah 84321
435-752-4200

Minutes from the 2006 Technical Committee Meeting

The SDI-12 Support Group's Technical Committee held its annual meeting on Monday, November 6, 2006. This meeting was held in conjunction with the American Water Resources Association (AWRA) yearly conference, which has held at the Sheraton Inner Harbor Hotel, in Baltimore, Maryland. The posted agenda for the meeting was:

- Welcome and introductions
- Review of all comments received in the past year
- Discussion on the future of SDI-12
- Open discussion on SDI-12
- Selection of technical committee members for the upcoming year

Members of the Technical Committee Present at the Meeting:

- Jerry Calhoun, Chairman of the Technical Committee, Sutron Corporation
- Mike Jablonski, Chairman of the SDI-12 Support Group, NR Systems, Inc.
- Albrecht Dorr, Member of the Technical Committee, Ott Messtechnik

Others Present at the Meeting

- William Dentel, Aquatrak Corporation
- Jim Smith, Aquatrak Corporation

Jerry Calhoun called the meeting to session at 9:00 A.M. Introductions were made to our two guests, William Dentel and Jim Smith. This was the first time that Mr. Dentel or Mr. Smith had ever attended a meeting of the SDI-12 Support Group.

A review of all comments received about SDI-12 during the past year followed. Mike Jablonski reported that he had received comments from Hach Company about a sensor's control of the SDI-12 bus between after it receives a command, but before it returns a response. Mike said that he passed the question to Jerry Calhoun. Jerry, in turn, answered Hach Company in writing. Mike Jablonski said that he had answered several questions about SDI-12 over the past year, but had not received any proposals to change anything about SDI-12.

No other comments about SDI-12, or proposals to change SDI12, were received by anyone present during the previous year.

General discussion about SDI-12

The two representatives from Aquatrak reported that they have designed a sensor that responds to two different SDI-12 addresses and they used the C commands for lots of concurrent measurements.

Albrecht Dorr said that his company has problems with the distance to an SDI-12 sensor and that the 200 feet specified in the SDI-12 Specification is too short. He says that their sensors switch to the RS-485 interface the distance between a sensor and data recorder is beyond 200 feet. In some cases, however, they do use SDI-12 when the cable length is greater than 200

feet. He would like text added to the SDI-12 Specification with guidelines on how to go beyond 200 feet. Sensor manufacturer's, he said, could document the limiting constraints and that in certain cases it is practical to extend SDI-12 beyond 200 feet. This discussion was concluded with an action item being assigned to Albrecht. He agreed to write a description explaining how and under what conditions that 200 foot length can be extended.

A short discussion on RS-485 followed. The two representatives from Aquatrak said they see no demand for RS-485 in their work. Jerry Calhoun said that RS-485 would not meet the impedance requirements of SDI-12.

Albrecht Dorr suggested that SDI-12 change from 7 bit ASCII data to 8 bit binary data to support 4 byte floating point numbers. Jerry Calhoun responded that this would cause problems and raise many questions: 16 bit or 32 bit floating point numbers? where is the least significant bit? what type of binary integers would be supported, and that functions like the C function, printf, would consume too much memory in firmware programs. He also said that binary data transmissions are difficult to monitor.

The meeting concluded with an unanimous agreement to reinstate the existing technical committee, under the bylaws of the corporation, for another year. Members of the SDI-12 Support Group's Technical Committee are:

Albrecht Dorr, Ott Messtechnik
Jerry Calhoun, Sutron Corp.
Joe Thurston, Campbell Scientific
Mike Jablonski, NR Systems
Paul-Emile Bergeron, Environment Canada
Roy Johnson, USGS

The meeting adjourned after reinstating the Technical Committee for another year.

September 3, 2007

SDI-12 Support Group
165 East 500 South
River Heights, Utah 84321
435-752-4200

Minutes from the 2006 SDI-12 Support Group

The SDI-12 Support Group's Technical Committee held its annual meeting on Tuesday, November 7, 2006. This meeting was held in conjunction with the American Water Resources Association (AWRA) yearly conference, which has held at the Sheraton Inner Harbor Hotel, in Baltimore, Maryland. The posted agenda for the meeting was:

- Welcome and introductions
- Report from the technical committee and open discussion on SDI-12
- Financial report
- Selection of Board Members for 2006-2007

Present at the meeting were Mike Jablonski (Board Member and President of the Corporation) and Jerry Calhoun (Board Member). (Under the bylaws of the Support Group, the presence of only two members constitutes a quorum.)

The report from the technical committee was waived because Mike and Jerry were both present at the Technical Committee meeting which was held a day earlier.

Mike Jablonski then gave a financial report for the previous two years. The report was for two years, rather than one year, because the SDI-12 Support Group did not hold an annual meeting in 2005. (The prior meeting was in November, 2004, in Orlando, Florida).

Mike reported a revenue in dues for the past two years of **\$ 4,600.00**

Expenditures for the past two years were:

\$ 100.00	donation to an AWRA scholarship fund in 2004
\$ 7.00	corporation filing fees to the state of Utah
\$ 305.00	registration fee to AWRA for the 2004 conference
\$ 1,683.99	travel expenses for Jerry Calhoun, Sutron Corporation, to attend the meetings in Albuquerque (2001) and San Diego (2003)
\$ 785.20	travel expenses for Mike Jablonski to attend the meeting in Orlando (2004)
\$ 2,881.19	Total Expenditures

Mike reported that the current cash assets of the corporation are: **\$ 7,265.34**

Mike also reported that the corporation has not yet received an invoice from Amass Data Technologies for hosting and working on the SDI-12 Support Group's Web Page.

Mike also requested, and Jerry agreed, to make a donation of \$100.00 to AWRA's scholarship fund.

Mike expressed a desire to server for another year as the Chairman of the SDI-12 Support Group. Jerry agreed to remain on the Board of Directors. Then the meeting adjourned.