

Prepared by: J. Blair

The meeting was held at Tektronix in Beaverton, Oregon on 2 February 2001.

In attendance were:

Name	Organization
Nick Paulter	NIST
Jerry Blair	Bechtel Nevada
Otis Solomon	Sandia
Tom Linnenbrink	Q Dot
Dan Knierim	Tektronix
Chris Duff	Agilent

1. **Form of terms.** We discussed the format for dictionary entries “amplitude, signed pulse” (military style) vs. “signed pulse amplitude.” We decided on the former so that related terms will appear close in the dictionary. Don Larson was volunteered by Nick to rearrange the definitions in this form.
2. **Algorithm language.** The question of a formal, consistent language for expressing algorithms was raised. We decided to use a subset of Visual Basic for Applications. I will make a written proposal of what subset to use.
3. **Mode separation algorithm.** I previously supplied an algorithm for separating a bimodal histogram into its two parts. Chris Duff pointed out that he uses 40% and 60% in place of my 50%. I will write a new algorithm that includes all such methods as a special case.
4. **Unequal bin sizes.** We discussed equal vs. unequal size bins. Equal bin sizes are needed for these applications. The standard needs to allow for the correction for unequal bin sizes in the histogram algorithms.
5. **Algorithm switching.** Some digital oscilloscopes have multiple methods for measuring parameters. The method selection can be data dependent. For example, Agilent uses either the modes of a histogram or the extremes (if the histogram is nearly uniform.) There was a discussion on the problems caused to the user by automatically switching between methods. It was generally agreed that if a manufacturer decides to automatically switch between modes, the criteria for method selection should be specified. Chris volunteered to write something on this. He also pointed the desirability of having a continuous function to transition between methods.
6. **Independence of state boundaries and reference levels.** Nick, who thought that state boundaries should be independent from reference levels, initiated a discussion. This discussion has taken place several times in the past. Dan will write up examples of problems caused by making state boundaries independent of reference levels.
7. **Changes to draft.** A few changes were made to the draft during the meeting:

- Added definition of “higher reference level.” In a two state waveform, the lower bound of the high state, usually the 90% reference level.
  - Removed definition of “offset.”
  - Removed definition of “positive.”
8. **Jitter definition.** It was agreed that some definitions of jitter related terms should be in the standard.
  9. **Interpolation vs. filtering.** We learned, to the surprise of several of us, that interpolation in an oscilloscope might actually include some extra filtering. The standard should address this terminology.