Modernization of Event Timer RTS 2006

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A Brief History of RTS 2006

Signal Processor Block

3 to 7 ns pulse width range; -0.1 to -3.0 V amplitude range
New development - TS/ATIC
Testing TS/ATIC with Tektronix AFG 3252C and Tabor WS58352
TS/ATIC lab test results: RMS 18ps
A brief comparison

<table>
<thead>
<tr>
<th></th>
<th>RTS 2006 signal processing unit</th>
<th>TS/ATIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input signal range</td>
<td>350mV-3V</td>
<td>120mV-2V</td>
</tr>
<tr>
<td>Amplitude meas. precision</td>
<td>?</td>
<td>1ns</td>
</tr>
<tr>
<td>Can work without CFD</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Can work with newer timer models</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Selector output rise time</td>
<td>3-4ns</td>
<td>1ns</td>
</tr>
</tbody>
</table>
RTS 2006 + TS/ATIC + ETSC
Conclusions and things to do

• We can now replace CFD with the new signal processing module and software solution
• Better precision – preliminary tests shows up to two times better calibration RMS
• Start to use in routine tracking
• Develop new software to fully utilize TS/ATIC capabilities
• Better amplitude calibration device
Acknowledgments

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Thank you for your attention!