

ToroidMeeting-May-17-06

Toroid Electronics Meeting Minutes, May 17, 2006

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Contents

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Attendees:

Steve Smith	John Dusatko	Hamid Shoaee
Bob Simmons	Cecile Limborg	Michael Cecere

Agenda:

1. uController based design
2. IOC Implications
3. Project Timeline Overview

Presentation Materials:

[MicroController Electronics](#), [M. Cecere](#) (PPT Format)

Minutes:

1. Discussed using microcontroller in place of FPGA
 - a. Microchip PIC processor, 40 MHz, 40 MIPS
 - i. also supports TCP/IP
2. Don't need [MPS dynamic threshold](#) setting from IOC
 - a. microController lets us do ratiometric 10%, 50% calculations for Comparator mode
 - b. might need for Over-Charge threshold setting on future toroids
3. Still use Akre's fast ADC board for waveform acquisition
4. Ethernet capabilities of PIC processor could become main comm link with IOC
 - a. If fast enough for 120Hz update rate
5. Bob simmons has used a PIC18 controller in a similar project

Action Items:

1. **M. Cecere:** Any Toroid cables that are in comparator mode appear in seperate racks?.
2. **M. Cecere:** Develop Project Timeline with assistance
3. **M. Cecere:** Estimate PIC performance, from ICE and Bob Simmons work
4. **M. Cecere:** Check with Ron Akre on availability of his 4-channel board
5. **M. Cecere:** Develop PIC flowchart and timing charts
6. **M. Cecere:** Develop Materials for CDR next wed. May 24