

NSF FREEDM Systems Center

Year 5 Annual Site Visit

June 11-12, 2013

Raleigh, NC



Agenda

Monday June 10, 2013	
Location: Tuscan Blu	
6:00 PM – 8:00 PM	Private Dinner – SAB, IAB Chairs, Invited Faculty and Guests

Site Visit Day 1:

Tuesday June 11, 2013	
Location: NC State Hunt Library Auditorium, NC State University Centennial Campus	
7:30 AM – 8:00 AM	Registration (Hunt Library Auditorium 1 st Floor)
7:30 AM - 8:00 AM	Continental Breakfast – ALL Attendees and SVT (2 nd Floor Multipurpose Room)
8:00 AM – 8:10 AM	Welcome – Dean Louis Martin-Vega
	Introduction of Site Visit Team and NSF Staff – Alex Huang
8:10 AM - 9:00 AM	Center Overview and Major Accomplishments – Alex Huang (8:10 – 8:50, +10 min Q&A)
Research Programs	
9:00 AM - 9:30 AM	Green Energy Hub (GEH) Testbed - Mesut Baran (9:00 – 9:20, +5 min Q&A)
9:30 AM - 9:45 AM	Break and Move to Parallel Sessions
Parallel Session I: System Related Subthrusters	1: System Theory, Modeling, and Control (SMC) – Jerry Heydt (9:45 – 10:00, +5 min Q&A) 2: Large Scale System Simulation (LSSS) Testbed– Mariesa Crow (10:05 – 10:25, +5 min Q&A) 3: Integrated DGI/RSC Development – David Lubkeman (10:30-10:45, +5 min Q&A) 4. Hardware in the Loop (HIL) Testbed - Mischa Steurer (10:50 – 11:10, +5 min Q&A)
9:45 AM - 11:15 AM Lecture Hall (4th Floor)	
Parallel Session II: Component related Subthrusters	1. Post Silicon Devices (PSD) – Veena Misra (9:45 – 10:00, +5 min Q&A) 2. Fault Isolation Device (FID) – Mischa Steurer (10:00 – 10:15, +5 min Q&A) 3. Solid State Transformer (SST) – Subhashish Bhattacharya (10:20 – 10:35, +5 min Q&A) 4: Advanced Storage (AS) – Jim Zheng (10:40 – 10:55, +5 min Q&A) 5: Distributed Energy Storage Device (DESD) - Srdjan Lukic (11:00 – 11:15. + 5 min Q&A)
9:45 AM – 11:20 AM Library Auditorium	
11:20 AM – 12:00 PM	SVT Executive Session (Private) – Meeting Room 4105 (4 th Floor)
Lunch	
12:00 PM – 1:00 PM	Catered Lunch – Multipurpose Room Hunt Library (2 nd Floor)
Education Programs - Parallel Session – Hunt Library Auditorium	
1:00 PM – 2:00 PM	Pre-College Program – Lisa Grable (1:00 – 1:15, +5 min Q&A) College Education Program – Mesut Baran (1:20-1:35, +5min Q&A) Education and Diversity – Penny Jeffrey (1:40 – 2:00, +5 min Q&A)
2:05 PM – 3:00 PM	SVT Private Session with Students (SVT and Students Only)
Industry and Innovation Program - Parallel Session - Lecture Hall (4 th Floor)	
1:00 PM – 1:30 PM	Industry Engagement and Innovation Ecosystem – Seth Crossno (1:00-1:25, +5 min Q&A)
1:30 PM – 2:00 PM	Systems Engineering, Benchmarking, External Engagement, Sustainability – Rogelio Sullivan (1:30 – 1:55 + 5 min Q&A)
2:00 PM – 3:00 PM	SVT Private Session with Industry (SVT and Industry Only)
FREEDM Laboratory Demonstrations – FREEDM Systems Center, 1791 Varsity Drive Suite 100	
3:00 PM – 5:30 PM	Travel to FREEDM Systems Center (3:00 – 3:15), Break Service provided Parallel Lab Demonstrations Systems 1: Large Scale System Simulation (Energy Board Room, 3:15-3:45) Systems 2: Hardware in the Loop (Energy Board Room (3:45-4:15) Hardware: Green Energy Hub and Enabling Technology (3:15-4:45) (Smart Grid Lab and then continue to the high voltage lab) Unstructured Lab Visit until 5:30
SVT Results and Feedback – FREEDM Systems Center	
5:30 PM – 6:20 PM	SVT Executive Session, Energy Boardroom
6:20 PM – 6:30 PM	SVT Clarifying Questions and Deliver Results and Issues to ERC Team – Education Seminar Room
7:00 PM – 9:00 PM	SVT Private Dinner (TBD. Organizer: Audrey Callahan)
SAB Meeting and Feedback – FREEDM Systems Center	
5:30 PM – 6:20 PM	SAB Meeting and Feedback on Center Research Program – Research Conference Room
7:00 PM – 9:00 PM	SAB and Deans Private Dinner (Hosted by Dr. Iqbal Husain) – Maximillians, Cary
ERC Faculty Working Dinner	
6:45 PM – until	Working Dinner - ERC Team Prepares response to questions raised

Site Visit Day 2:

Wednesday June 12, 2013	
Location: The State Club – 2450 Alumni Drive, Raleigh	
7:45 AM – 8:30 AM	Private Breakfast (SVT, Center Director, Deans' Council and Invited University Officials) (Room 119)
8:30 AM – 11:30 AM	Student Research Forum – Students only (FREEDM Seminar Room – Keystone Science Center)
8:30 AM – 10:00 AM	Response to Issues Raised by the Site Visit Team – Faculty and SVT (Room 120)
10:00 AM – 10:15 AM	Travel from State Club to MRC (Faculty, SAB, Industry)
10:00 AM – 4:00 PM	NSF Site Visit Team Report Writing (Closed Session – boxed lunch provided) – (Room 120)
4:30 PM	NSF Team Departs for Airport
FREEDM Retreat (Faculty, SAB, and Industry) – MRC (Monteith Research Center) Room 136 except where noted	
10:15 AM - 10:45 AM	IAB Feedback to the Center and Discussion
10:45 AM - 11:15 PM	SAB Feedback to the Center and Discussion
11:15 AM – 12:00 PM	Sustainability Discussion (Ewan Pritchard)
12:00 PM - 2:00 PM	FREEDM Social Box Lunch (MRC – Room 246)



FREEDM-Digital Grid Consortium Workshop

Location: MRC Auditorium

2:00 PM – 2:45 PM	Digital Grid Consortium Introduction and Overview & Discussion – Dr. Rikiya Abe
2:45 PM – 3:05 PM	DGI/RSC Integration – David Lubkeman
3:05 PM – 3:25 PM	Functional Blocks for System Development – Valeriy Vyatkin
3:25 PM – 3:45 PM	Overall Architecture of the Digital Grid Router – Noriaki Kobayashi
3:45 PM – 4:05 PM	The Digital Grid System Software – Toshiya Okabe
4:05 PM – 4:25 PM	Electricity Trading by the Digital Grid – Shigeki Suyama
4:25 PM – 4:45 PM	Energy Internet Market Framework – Wencong Su
4:45 PM - 5:00 PM	Discussion
5:00 PM	Adjourn