

<STEP1 Schedule in proposing project>

2013 2/1-5/31	2013 6/1-9/30	2013 10/1-1/31	2014 2/1-4/30
Software Construction Fab and Test Demo Office Work Discussion Design	Q1 report Review design concept Comparison with other research	Q2 report Intermediate report(Shigemi-san) Demonstration of multi layer Listing up subjects and Solutions for them	Q3 report HRI report(kawaguchi-san) Demo of 50 layer Step 1 Final Output Reporting Achievement
Mr. Shiquan Wang		PosDoc	Q4 report Demo of 50 layer Plan for Next Step Final Report
5/13 Orita -5/10 Summary up with MS -5/24 Making Q1 report additional Experiment -5/31 Learning fabrication and validation -5/31 Brain Storming of design from cell to device -5/14 Brain Storming of design from cell to device and Demanding Plan for Q1 -6/21 Brain Storming proposal and execution plan	7/3 Orita -6/28 Discussion with Professor -7/10 Making first trial and testing	9/1 Orita -9/6 Summary up result and submit paper -9/10 Preparing On site report(Demo)	9/20 1/19 Orita -9/16 Summary up result and submit paper -9/20 Preparing On site report(Demo)
Brushing up cell design and fabrication Reviewing specification in detail Deciding Output of Step1 and making Plan Catching up Fab and Test environment of Stanford EAP Verifying test multi-layer, electrode frame, charging line Investigating Subject from Previous EAP for multi-layer EAP	Proposing possible design for multi-layered and validation Brainstorming main Cell Design for Step 1 Requirement Deciding electrode, frame, charging line, glue Detailed Design of Cell And fabrication processes Creating 10layerd-EAP	Multi-layer production and Validation Re-thinking Current Design Modeling and Calibration Detailed Design of Cell And fabrication processes Detailed Design of Demonstration Equipment Creating Equip Creating 50layerd-EAP Stiffness Change for Demo Evaluation of achievement	Summarizing and making Final Repo and Next Plan Summarizing Results Brainstorming Content of Next Proposal And additional things for it Detailed Design of Demonstration Equipment Creating Equip Creating 50layerd-EAP Evaluation of achievement Updating Demonstration Preparing Paper Making Proposal and Next Schedule Q4 Proposal with Demo and Repo

<Task Items> Thick letter: important tasks

Task	Task Duration
1. Testing coate by Screen Printing, and evaluating uniformity and thickness, and then fabricating EAP cell by it, and finally evaluating the 1-cell performance	10 day
2. EAP modeling for multi-layered and calibrating between model and experimental data(refering Jonathan Clark's FEM)	3 day
3. Transferring research activities to PosDoc, and Orita	1.5 day
4. Explaining the background, and purpose of this collaboration to PosDoc	1.5 day
5. According to Q1result, survey, and modeling, Brainstorming from whole design for actuator=>the design for STEP1End=>cell or filme order design	6 day
6. Discussing with Professor about several idea for STEP1 End we decide the possible ideas, evaluating methods, and steps for realizing multi-layers, and then have a concensus for how to submit the achievement in Step1 end. Finally report to HRI-US and HGF representative.	4 day
7. Prototyping several ideas(1week) and preliminary evaluation(1week) to shrink the idea before 10+multi-layer fabrication(3-5cell evaluation)	5 day
8. Discussion about basics toward making thinner compliant electrode(HRI-US(OH))	2 day

<Visiting Schedule>

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5/13/13	5/14/13	5/15/13	5/16/13	5/17/13	5/18/13	5/19/13
<Notice>					Visiting HRI-US On site checking Lab and confirming	
5/20/13	5/21/13	5/22/13	5/23/13	5/24/13	5/25/13	5/26/13
1. Testing coate by Screen Printing, and evaluating uniformity and thickness, and then fabricating EAP cell by it, and finally evaluating the 1-cell performance						
5/27/13	5/28/13	5/29/13	5/30/13	5/31/13	6/1/13	6/2/13
1. Testing coate by Screen Printing, and evaluating uniformity and thickness, and then fabricating EAP cell by it, and finally evaluating the 1-cell performance						
2. EAP modeling for multi-layered and calibrating between model and experimental data(refering Jonathan Clark's FEM)			making Q1 report			
6/3/13	6/4/13	6/5/13	6/6/13	6/7/13	6/8/13	6/9/13
PosDoc Join		★HRI-US (Screen Printing)		Visiting HRI-US(OH)		
3. Transferring research activities to PosDoc, and Orita			8. Discussion about basics toward making thinner compliant electrode(HRI-US(OH))			
4. Explaining the background, and purpose of this collaboration to PosDoc						
6/10/13	6/11/13	6/12/13	6/13/13	6/14/13	6/15/13	6/16/13
★TV conf(internal)						
5. According to Q1result, survey, and modeling, Brainstorming from whole design for actuator=>the design for STEP1End=>cell or filme order design						
6/17/13	6/18/13	6/19/13	6/20/13	6/21/13	6/22/13	6/23/13
Prof. Mark Cutkosky Discussion Week			★TV conf(Orita, HRI, Professor, and HGF) (Ideas, and Plan for Q2, Q3)			
5. According to Q1result, survey, and modeling, Brainstorming from whole design for actuator=>the design for STEP1End=>cell or filme order design			6. Discussing with Professor about several idea for STEP1 End we decide the possible ideas, evaluating methods, and steps for realizing multi-layers, and then have a concensus for how to submit the			
6/24/13	6/25/13	6/26/13	6/27/13	6/28/13	6/29/13	6/30/13
7. Prototyping several ideas(1week) and preliminary evaluation(1week) to shrink the idea before 10+multi-layer fabrication(3-5cell evaluation)				Go back to Japan		