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# DFIG MINUTES

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#3---9/30/2014

## Discussed within meeting

- Turned in Transcript of client interview
- Update on conference (tiras will be here)
  - Need specs for Friday
- Spend more time on RSCAD this week
- Need to update personal log books
- Need to update portfolio
  - Grad-Students models are talking a bit longer

## Thoughts to Ponder

- Develop methodology on how to verify model
- What looks good and what looks bad
- Take a part of the DFIG so the team knows what the inner workings are
  - SNAPSHOT – what we are doing, and how we are planning to achieve it.
- UNDERSTAND WHAT WE HAVE TODAY IN PROTECTION FOR DFIG
  - Main faults
  - What are they doing to take care of it
  - Improvement on it

## Items to address

- Need client specs – talk to Dr. Hess
  - Design review, design the test and how it will be tested
  - January, how we did the test – for building basically.
  - We will build what is necessary for design to protect it. How far it extends into the grid is up to us. Must cover subject.
- Portfolio
- Team Picture
  - Pictures of tutorials
  - TEAM MEETING 4:00-6:00 to work on tutorials
- CONTACTS with SEL

## Ideas from Dr. Hess

- Model of the machine
- Method of protection (1scheme for some kind of fault)
- Run them by him – refine issues – generator protection people at SEL
  - What levels of current
  - What levels of time
  - What faults
  - Set it up with numbers associated
- Run it by Normand before design review. Use his time wisely
- Is the model verification more, or method of protection more
- If using model, verify it to verify it can do what we want it to do. Be confident that it works, then design a protection scheme. Normand might give us more direction later on.
- As we define what we want to do. Write the specs, we know what machine specs are, now we can define what faults, talk to SEL as to what faults they deal with.
- CONTACTS AT SEL FOR FAULTS/GENERATION, Mike Beachum might be able to introduce us to spencer goodall, hang li, both have been working at SEL, might know who to ask to find the right person.
  - Send email to find someone
  - Design – people part – finished product
- Can use SEL equipment, might need to modify
  - Dr. Johnson or Normand can possibly get it,
  - Don't have to reinvent what is in a blue box, EXTEND not Redesign
- Find out what is happening to machine, feeding machine?
  - DFIG might supply fault, everything keeps going, control system is priority.
- Might need to learn symmetrical equipment, negative sequence, you can pick up faults
- Zero sequence, compare with other designs
- Invent a component that finds fault
- Take the 3 phases coming out of machine – compare stator 3ph and rotor 3ph and add/multiply/over time to pick up on fault,
- Needs to reject tripping for other common faults