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Mars Lander 2007

What is Phoenix?

- A resurrection of the 2001 Mars Lander
- Used to measure volatiles and complex organic molecules
- Will use a robotic arm to dig up ice layers and analyze samples
- More info at <http://phoenix.lpl.arizona.edu>



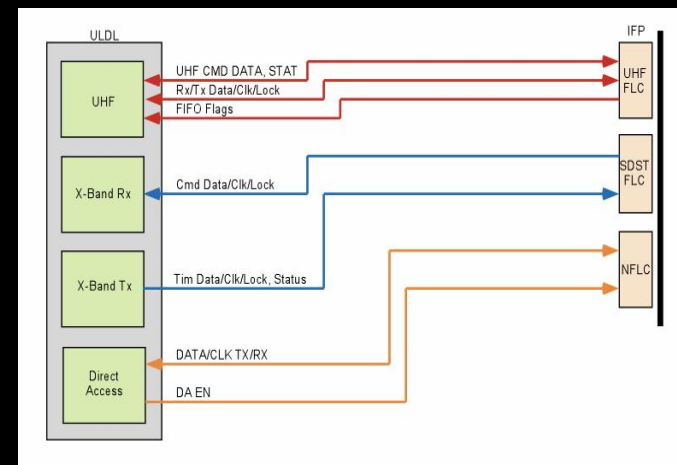
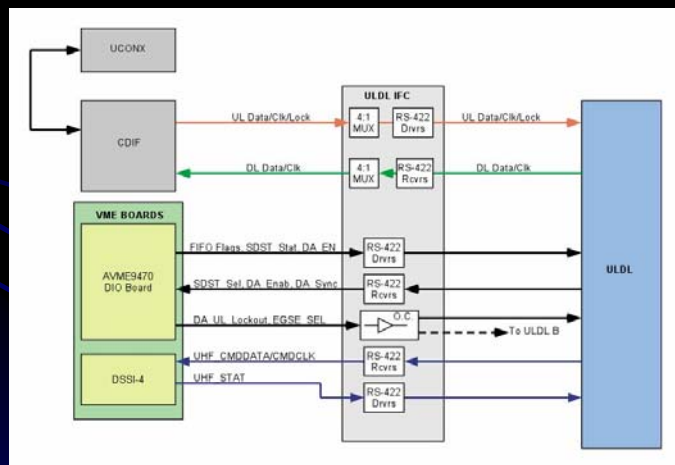
What I did

- Assisted in re-designing the PTL, Payload Test Laboratory for Phoenix
- Created electronics and packaging designs
- Participated in design reviews where work was evaluated
- Learned to use different programs
- Learned the design process



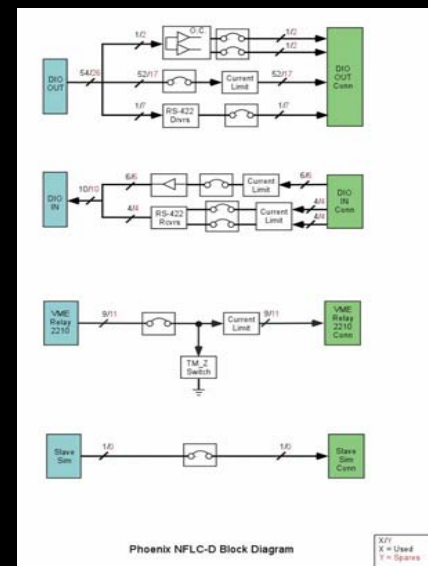
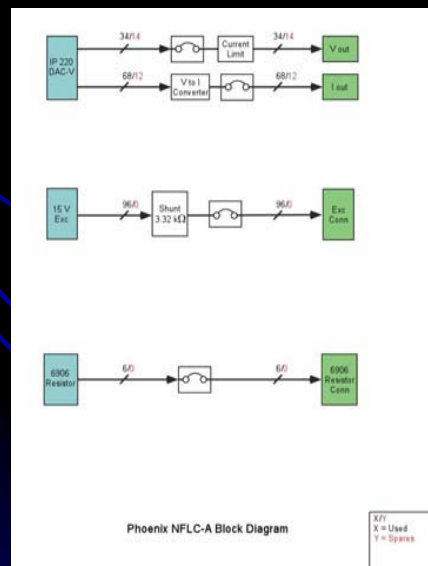
Updating Block Diagrams

- Update interface block diagrams
- Used old channelization list to create flight like harness, FLH, block diagrams



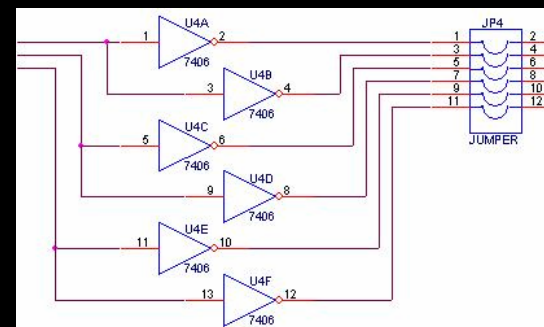
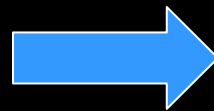
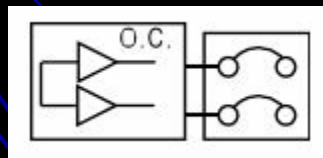
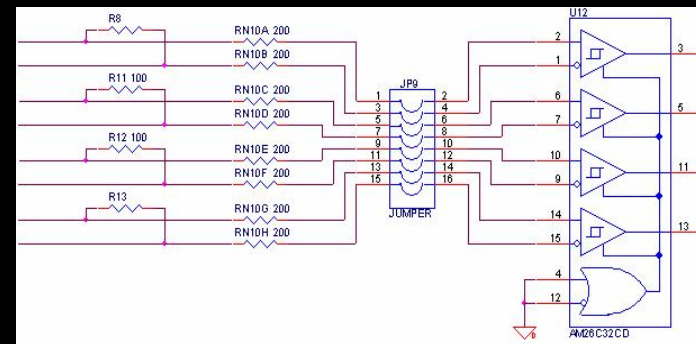
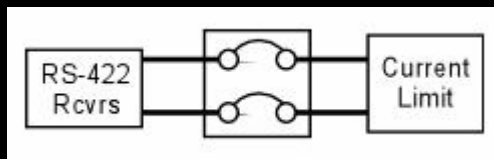
NFLC Cards Block Diagrams

- Decided to design three cards
- I designed the analog and digital non-flight like cards
- Used FLH and interface block diagrams



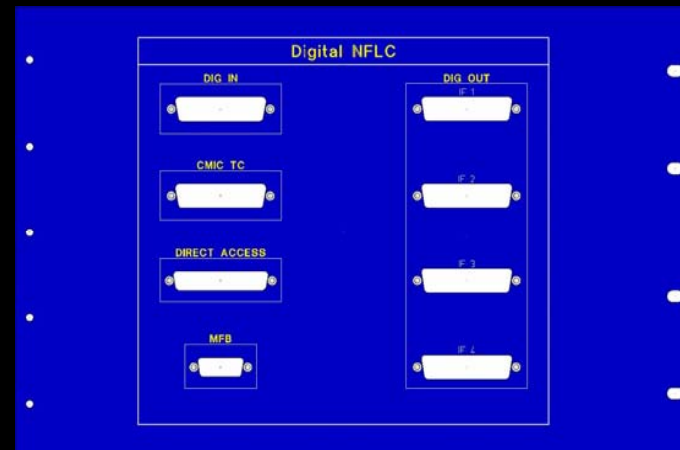
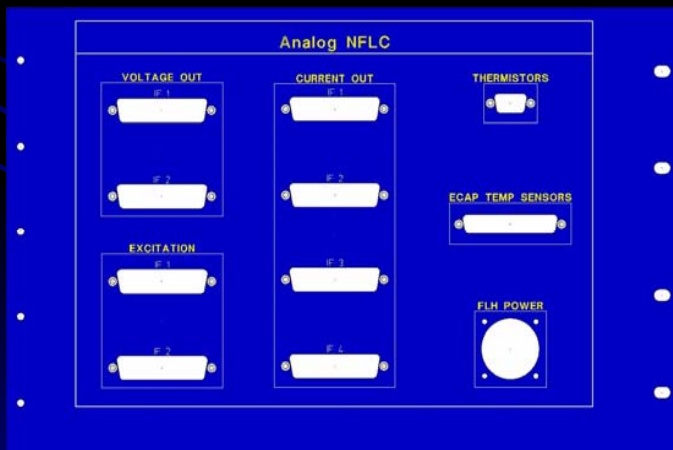
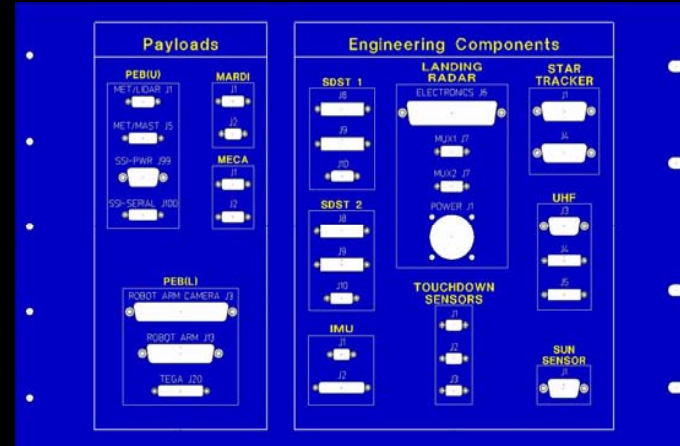
Designing Cards

- Used block diagrams and interface card schematics to design the cards
- Used schematic to update channelization list



Panel Design

- Used the connectors from schematics to design the panels for all three cards



Conclusion

- Helped design parts of Phoenix
- Gained valuable work experience
- Got to understand the design process
- Gained experience using different programs not used in school
- Now able to understand engineering process better



Special Thanks to

Lockheed Martin
NM Space Grant

