

Hospital Dr. Humberto Alvarado Vasquez, Masaya

James Tian
Justin Palpant

Meet the Staff



Maintenance department group photo and William,
director of the laboratories

Let's begin with a familiar easy fix...



Just kidding, we completely failed to fix these

Blood Pressure Cuffs

- Simple fixes!
 - Leaks
 - Gauges stuck
 - Gauges need calibration



Water Baths



Electrosurgery

- Patient grounding plates are not treated well
- Broken or worn connections need soldering
- Custom plug – can't be removed or replaced



Electrosurgery - Testing



Defibrillator

- Cleaning on the first machine
- Power supply problem – at last!
- Found replacement power cable; battery would not connect
- NiCd battery should be rechargeable, but lack of connection
- Light turns on! Battery begins to trickle charge



The Dutch Autoclave

- Problem #1 – No one speaks Dutch. Except...
- Problem #2 – software issue, error message
- Problem #3 – tech manuals are unavailable, resale online for \$50+
- Problem #4 – manufacturer not interested in responding to our inquiries
- Solution?



Sterilizations

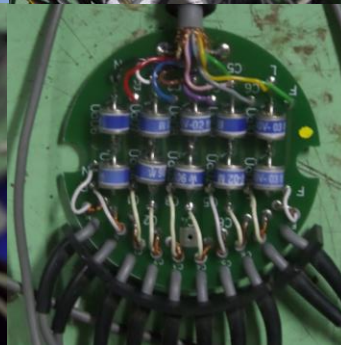
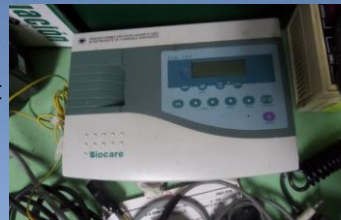


Operating Room

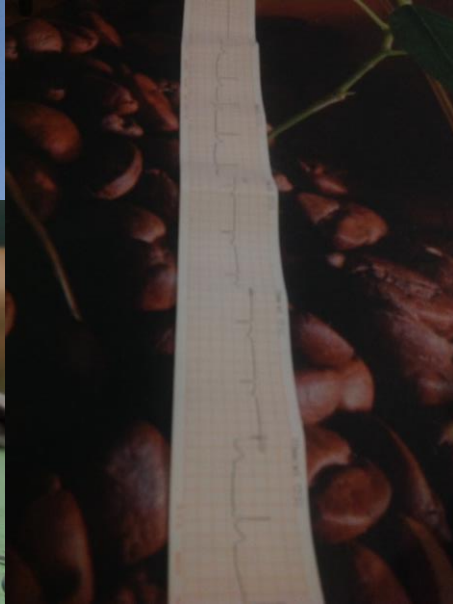
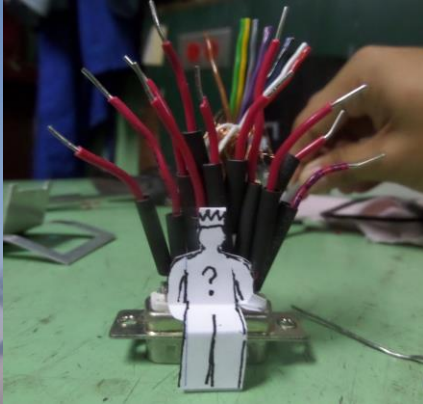


EKG

- Intermittent function – signal problem?
- Cleaned electrodes – no improvement
- Patient cable wire – 15-pin connector and shielding
- Lots of soldering, limited results



We're alive!



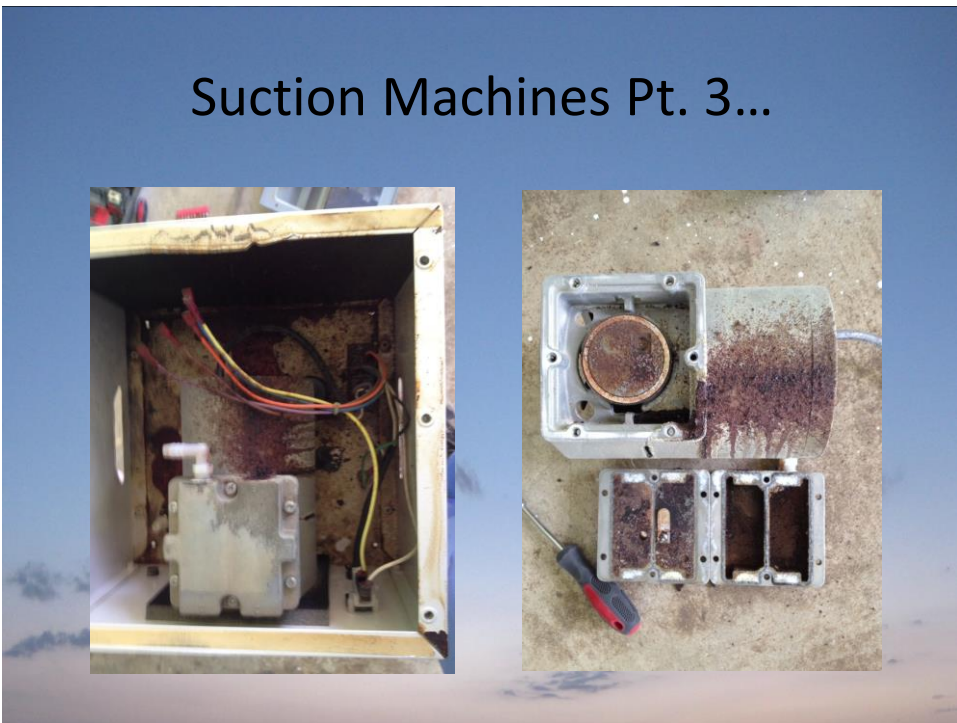
Suction
Machines Pt. 1



Suction Machines Pt. 2

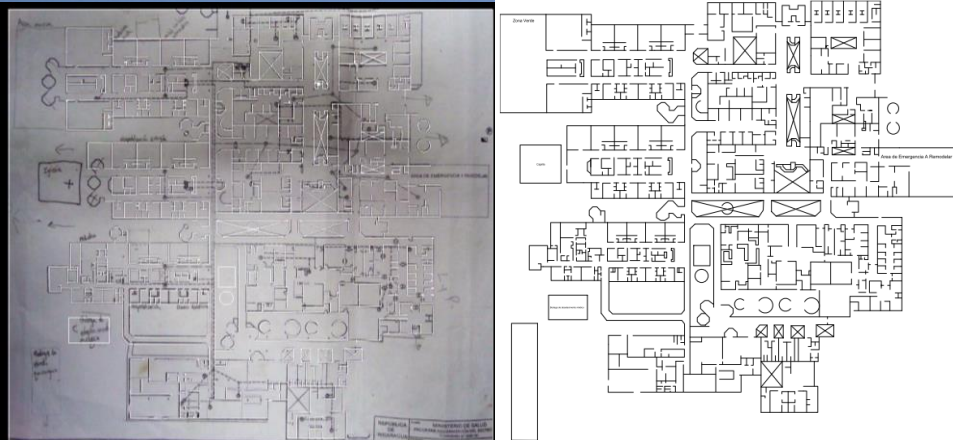


Suction Machines Pt. 3...



And a brief interruption by our
secondary projects!

Following the map that leads to you...



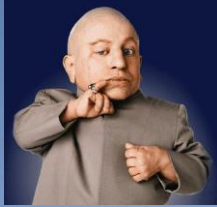
Most Magnificently Musical Masaya



Doppler Monitor



Mini Doppler Monitor



This is Engineering!!!



This is ALSO
Engineering...



Agitator/Incubator



Nebulizer



Closing Remarks

- Relationships made our job easier
- The hospital was extremely well run
- Had lots of fun with the staff
- Orlando, our supervisor, knew far more than we did

We are done!



