



Technical Presentations

MCHE 201 – Spring 2019

Dr. Joshua Vaughan

Rougeou 225

`joshua.vaughan@louisiana.edu`

`@Doc_Vaughan`

Why should I care?



- If you can't communicate your ideas, they are worthless.
- Those that can communicate become bosses.

Questions to Ask



- What is the purpose of this presentation?

- Who is the primary audience?

- Technical competence
- Expectations
- Language skills
- Interests
- ...

Who are the customers and what do they want?

- What's the purpose of *this* slide?

What are we reporting?



- Present accomplishments/results
 - A design, prototype, device, *etc.*
 - New method, theory, or plan for solving a problem
- Do ***NOT*** present administration
 - We did this... Then, we tried that... Finally, we found...
 - Information on team meetings, *etc.*

Technical Presentations



- Get to the point... “*ta-da*” moments rarely work
 - Say what you are going to talk about
 - Talk about it
 - Say what you just talked about
- Basically same order as report.

Typical Presentation Sections



- Title Slide
- Agenda
- “Main” Sections
- Conclusions
- Thank You

Basically same
order as report.

Typical Presentation Sections



- Title Slide
 - Introduce your project
 - Introduce yourself *and* your team
- Agenda
- “Main” Sections
- Conclusions
- Thank You

Typical Presentation Sections



- Title Slide
- Agenda
 - What should the audience expect to see
 - Can cut for short presentations
- “Main” Sections
- Conclusions
- Thank You

Typical Presentation Sections



- Title Slide
- Agenda
- “Main” Sections
 - Will vary by document type
 - For design presentations:
 - ◆ Introduce the problem
 - ◆ Overview of the design
 - ◆ Details of the design
 - ◆ Support for its choice
- Conclusions
- Thank You

Typical Presentation Sections



- Title Slide
- Agenda
- “Main” Sections
- Conclusions
 - *Concisely* summarize what was presented
 - *No* new information
- Thank You

Typical Presentation Sections



- Title Slide
- Agenda
- “Main” Sections
- Conclusions
- Thank You
 - Acknowledge any sponsors
 - “Thank you. I’ll be happy to answer any questions you have.”

The Slides Support You



He's talking directly to the audience...

... while the text supports his joke.

The Slides Support *You*



He's talking to the audience.
The slides support his point, not make it.

Slide Templates – the Content is the Star



A MICROSOFT DEFAULT THEME

I sure am wasting a lot of space on those fancy colors below.



Slide Templates – the Content is the Star

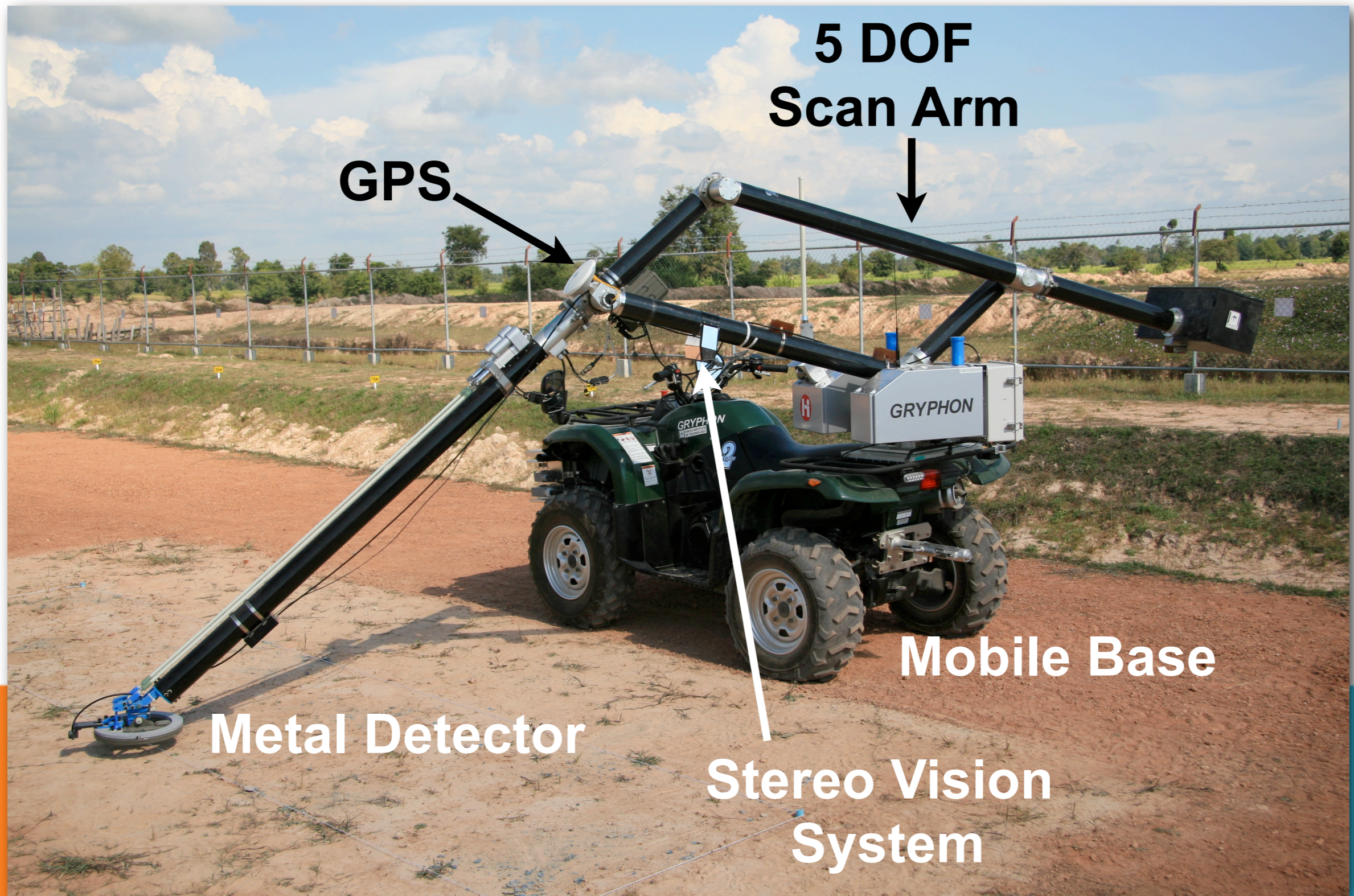


A MICROSOFT DEFAULT THEME
Terrible

I sure am wasting a
lot of space on
those fancy colors.

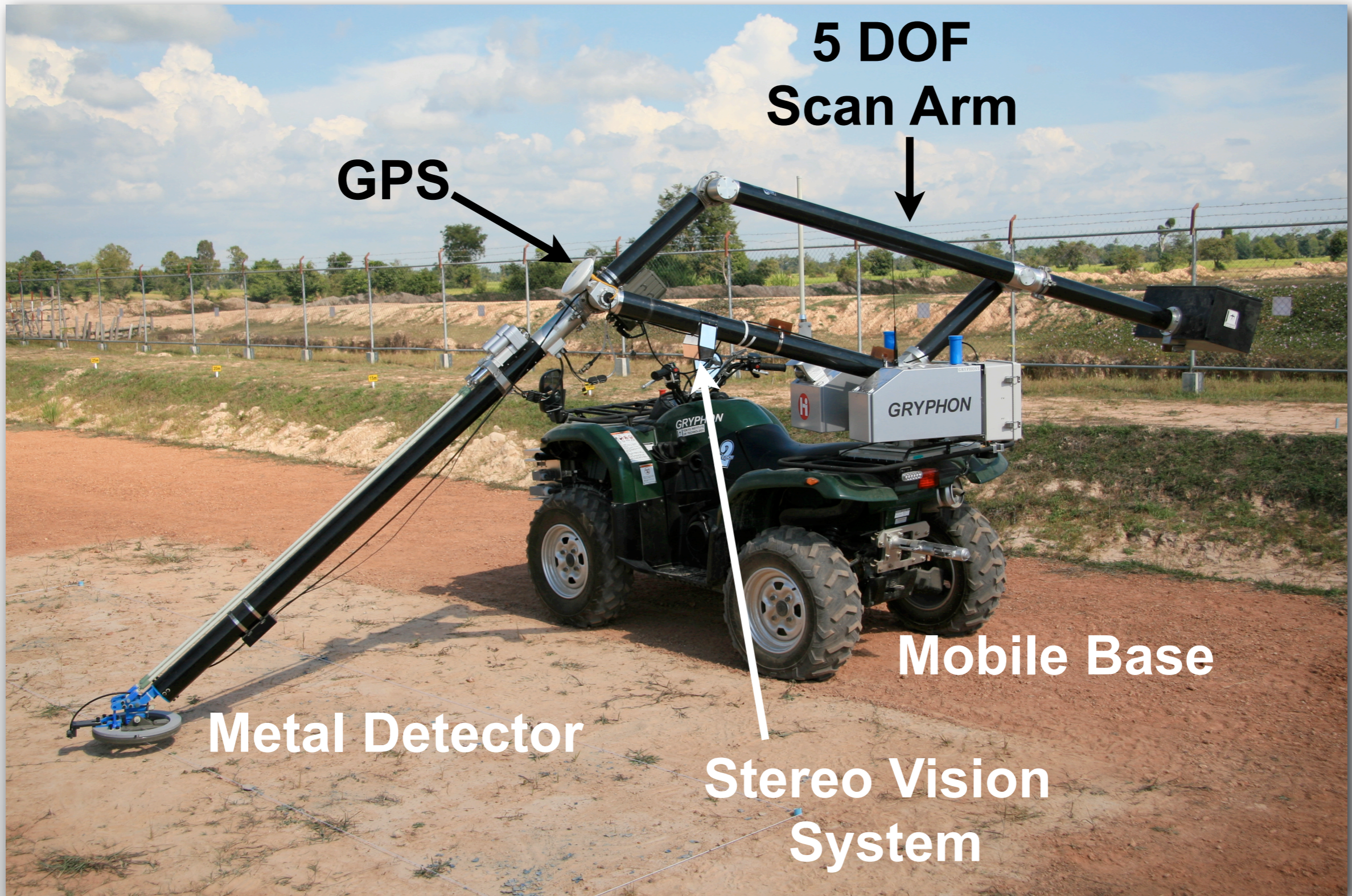
Why waste this space?

A MICROSOFT DEFAULT THEME



The background here is distracting.

GRYPHON



**5 DOF
Scan Arm**

GPS



Mobile Base

Metal Detector

**Stereo Vision
System**

How to Address Design Tools



- *Concisely* explain what the tool is
- Tell the audience what to look at
 - What's important?
 - Point to and/or highlight
- Explain why it's important

Note: You will likely need a “presentation” version

Project Timeline



| Task | Month | | | | | | | | | | | | |
|-----------------------------------------------------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| | J | J | A | S | O | N | D | J | F | M | A | M | J |
| Conceptual Design | | | | | | | | | | | | | |
| Refinement of customer needs and requirements | █ | █ | █ | | | | | | | | | | |
| Development of engineering specifications | █ | █ | █ | | | | | | | | | | |
| Functional decomposition | █ | █ | █ | | | | | | | | | | |
| Development of alternative concepts | | | █ | █ | | | | | | | | | |
| Evaluation of alternative concepts | | | █ | █ | | | | | | | | | |
| Concept selection | | | | | | | | | | | | | |
| Prototype Construction | | | | | | | | | | | | | |
| Develop detailed design | | | | | | | | | | | | | |
| Finalize manufacturing process | | | | | | | | | | | | | |
| Finalize actual manufacturing | | | | | | | | | | | | | |
| Manufacturing | | | | | | | | | | | | | |
| Control System Development | | | | | | | | | | | | | |
| Develop high-level control strategy | | | | | | | | | | | | | |
| Develop/write control software | | | | | | | | | | | | | |
| Implement supervisory control | | | | | | | | | | | | | |
| Develop User Interaction for prototype system | | | | | | | | | | | | | |
| Design Performance Evaluation and Refinement | | | | | | | | | | | | | |
| Test of prototype subsystems | | | █ | █ | █ | | | | | | | | |
| Test of full prototype with "perfect" loading | | | | | | | | | | | | | |
| Test of full prototype failure modes | | | | | | | | | | | | | |
| Refinement of mechanical design | | | | | | | | | | | | | |
| Refinement of control system and user interaction | | | | | | | | | | | | | |
| Milestones | | | | | | | | | | | | | |
| Contract Signed | | | | | | | | | | | | | |
| PhD student, Seema Mallavalli, Hired | | | | | | | | | | | | | |
| First prototype subsystem test | | | | | | | | | | | | | |
| First full prototype tests | | | | | | | | | | | | | |

This is too small to read
and too much information
to process.

Latest Revision



| Task | Month | | | | | | | | | | | | |
|-----------------------------------------------|-----------|-----------|-----------|-------------------|-------------------------------|-------------------------------|---|---|---|---|---|---|---|
| | J | J | A | S | O | N | D | J | F | M | A | M | J |
| Conceptual Design | | | | | | | | | | | | | |
| Refinement of cust. needs and requirements | Completed | Completed | Completed | | | | | | | | | | |
| Development of engineering specifications | Completed | Completed | Completed | | | | | | | | | | |
| Functional decomposition | Completed | Completed | Completed | | | | | | | | | | |
| Development of alternative concepts | | | Completed | Completed | | | | | | | | | |
| Evaluation of alternative concepts | | | Completed | Completed | | | | | | | | | |
| Concept selection | | | | Original Schedule | Change from Original Schedule | | | | | | | | |
| Prototype Construction | | | | | | | | | | | | | |
| Develop detailed design from selected concept | | | | Original Schedule | Change from Original Schedule | Change from Original Schedule | | | | | | | |
| Finalize manufacturing specifications | | | | Original Schedule | Change from Original Schedule | Change from Original Schedule | | | | | | | |
| Finalize actuator and sensor selection | | | | Original Schedule | Original Schedule | Change from Original Schedule | | | | | | | |
| Manufacturing/construction of prototype | | | | Completed | Original Schedule | Change from Original Schedule | | | | | | | |

| |
|-------------------------------|
| Original Schedule |
| Completed |
| Change from Original Schedule |

Latest Revision



| Task | Month | | | | | | | | | | | | |
|-----------------------------------------------|-----------|-----------|-----------|-------------------|-------------------------------|-------------------------------|---|---|---|---|---|---|---|
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| Conceptual Design | | | | | | | | | | | | | |
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| |
|-------------------------------|
| Original Schedule |
| Completed |
| Change from Original Schedule |

General Presentation Guidelines



- Use “clean” slide templates – Your content is the star
- Avoid unnecessary animations
- You might need a separate set of figures for presentation
 - Bigger text
 - Less detail (an entire HoQ will not fit on a slide)
- Include slide number (for audience questions)
- **This is too many words on a slide!!!**
- Practice. Revise. Practice. Revise. Practice...
- See why you should avoid unnecessary animations?
- Let the audience know you are finished...



Thank you.