How to Present

Hod Lipson

Why Should I care?

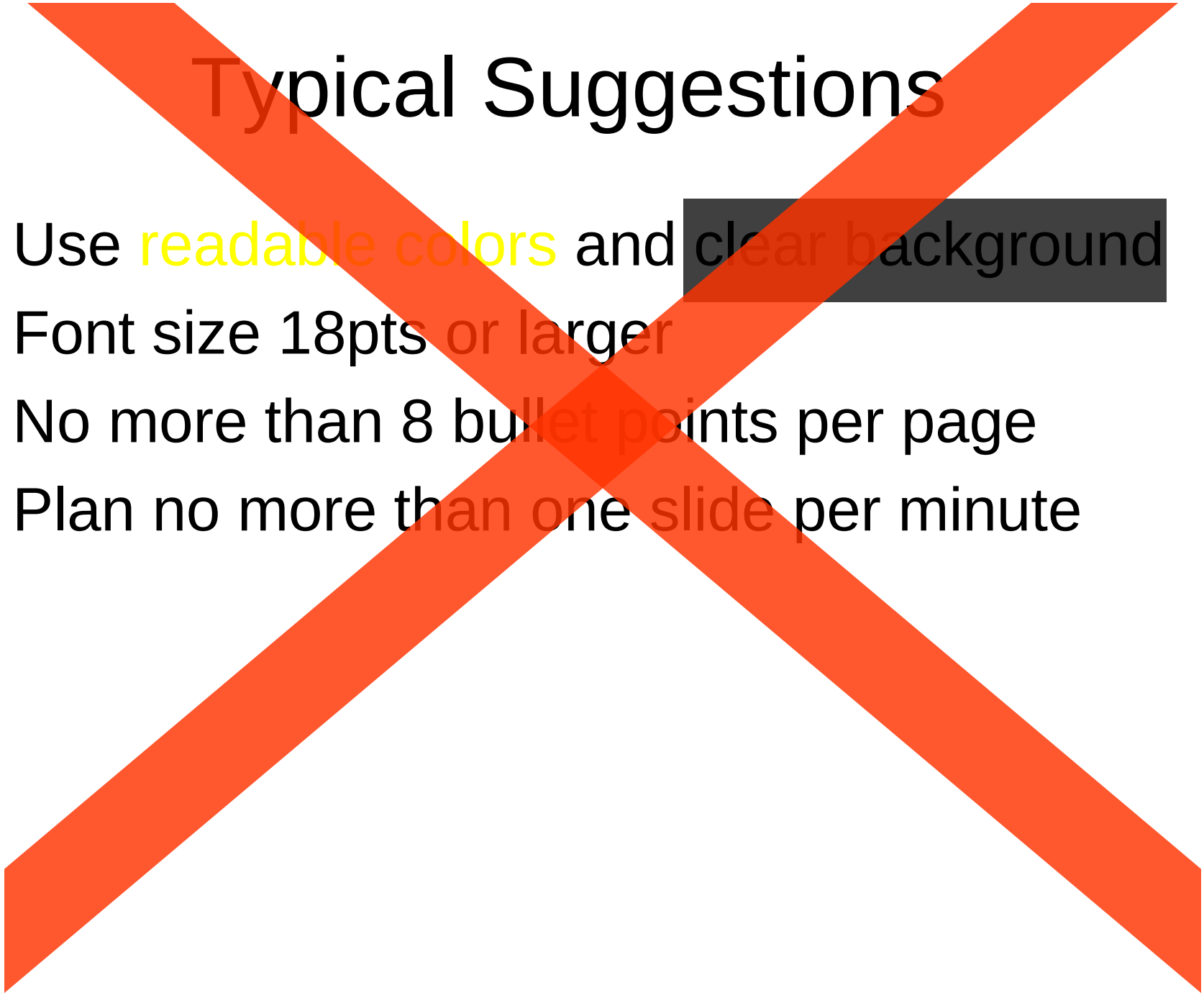
Impact

Impact = **Quality of work**

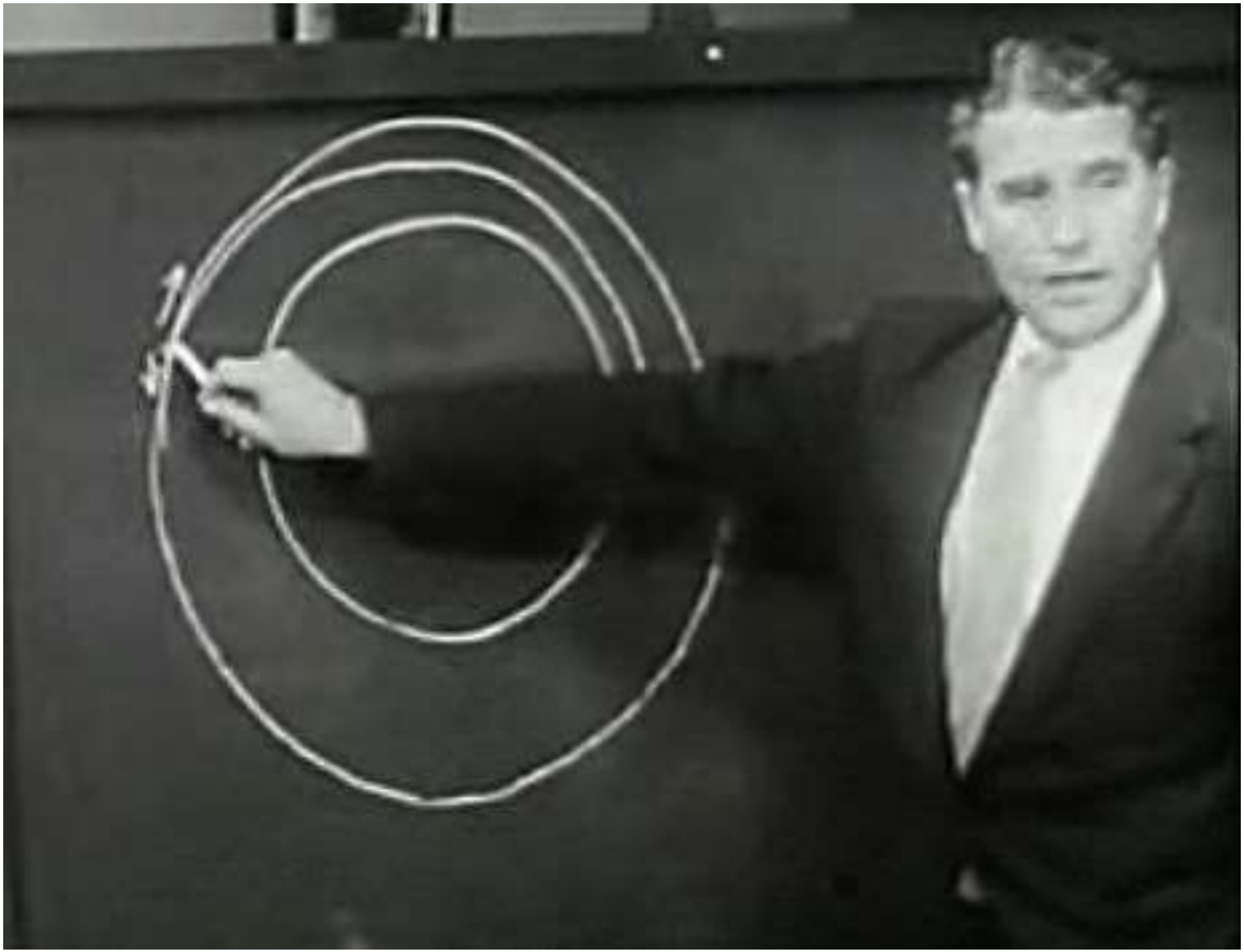
Impact = **Quality of work** x **Quality of communication**

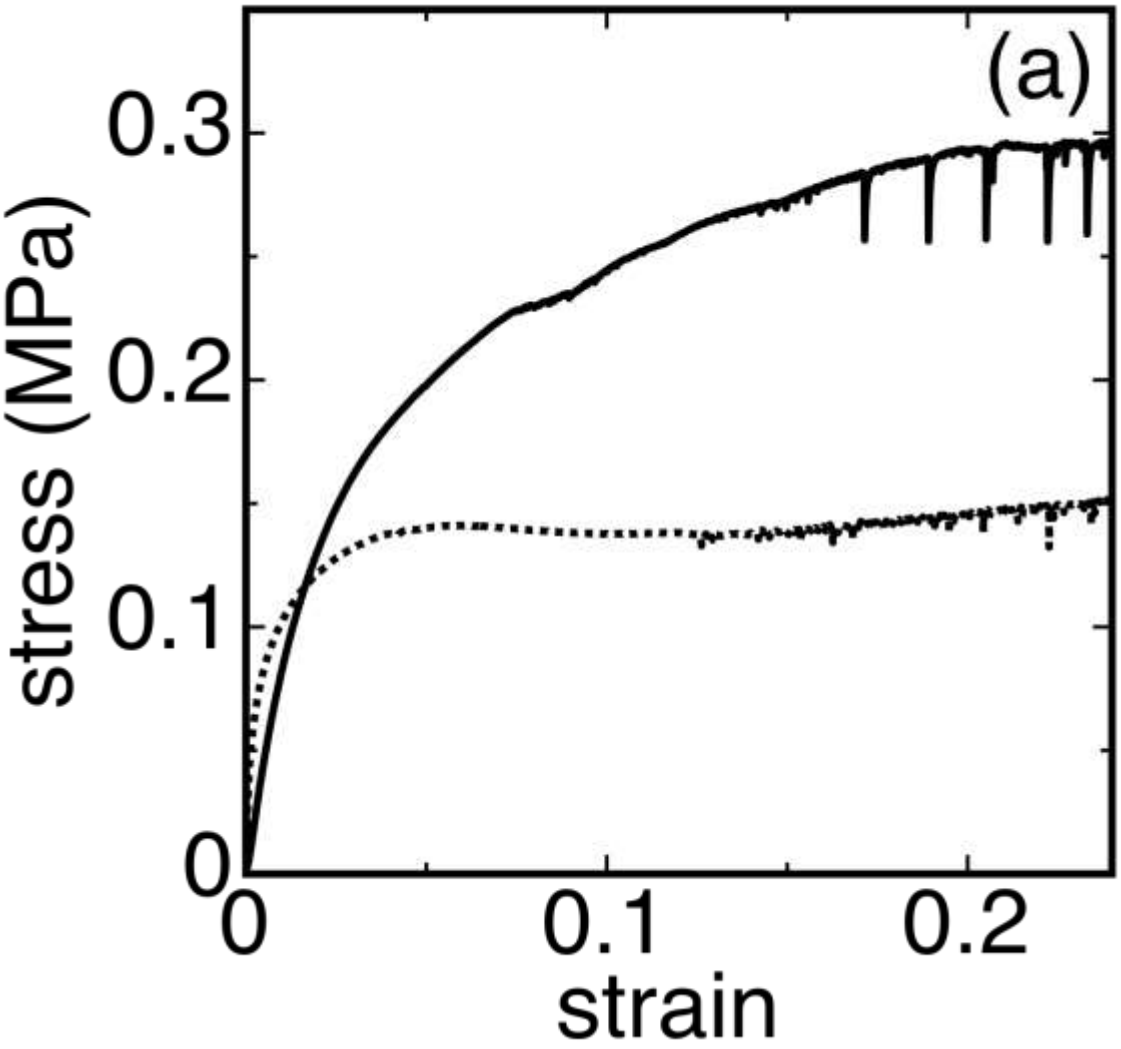
Typical Suggestions

- Use readable colors and clear background
- Font size 18pts or larger
- No more than 8 bullet points per page
- Plan no more than one slide per minute




Saskatchewan
Centre of the Arts




(a)
stress (MPa)
0.3
0.2
0.1
0
0
0.1
0.2
strain


Value Proposition
Australia
Queensland
QCTN

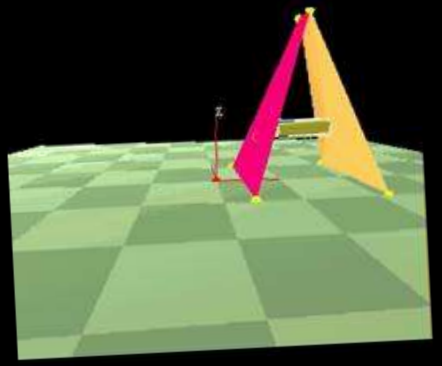
Quasi Static Simulator

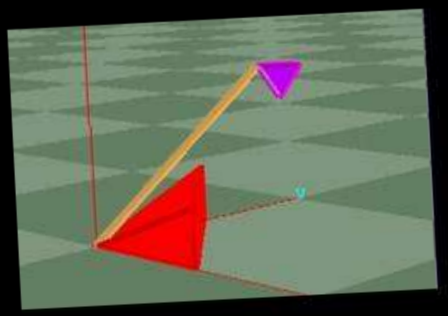
- Each frame is statically stable
- Simpler to solve, easy to induce in reality
- Model degrees of freedom move to minimize overall energy

Elasticity Gravity

$$H = \sum k\delta^2 + \sum mgh + contact\_energy + \ldots$$

$$V_x^{(k+1)} = V_x^{(k)} - \alpha \cdot \partial H / \partial V_x$$

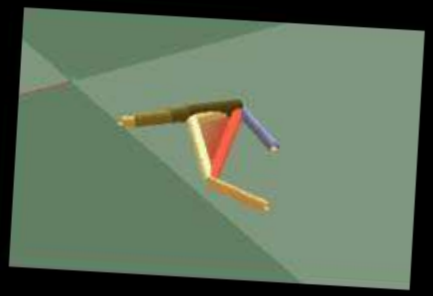




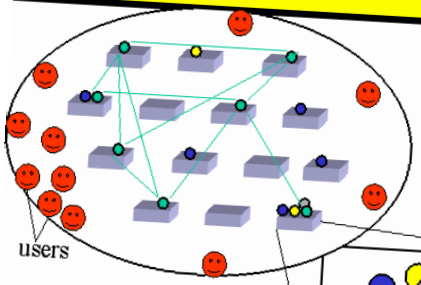
- Handles collision, friction, flexion, material failure. Nonlinear effects like snap-through, as well as under-constrained objects.
- Uses **noise** to cover for inaccuracies

Evolving for Locomotion

- **Population**: Starts with empty/null designs. Size 200 ~ 1000 machines
- **Genotype/phenotype**: bars/actuators, and neurons
- **Fitness function**: distance center of mass moved during 12 cycles of the neural net
- **Selection function**: fitness proportionate
- **Genetic operators**: small mutations:
  - Connect/remove small bar or unconnected neuron
  - Change bar length or neuron synapse
  - Split bar/vertex
  - Connect/disconnect neuron to bar (actuator)
- **Replacement function**: random.
- **Evolution dynamics**: Steady state 100 ~ 10000 generations. Various dynamics of convergence and divergence. Parallel implementation yields "natural evolution" drive for simplicity:



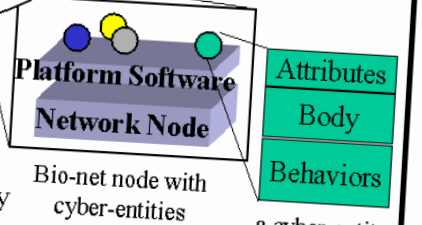
Bio-Networking Architecture



New Paradigm: use collection of interacting cyber-entities to create network application

Biological analogies:

- emergent behavior
- energy exchange
- reproduction when energy is abundant



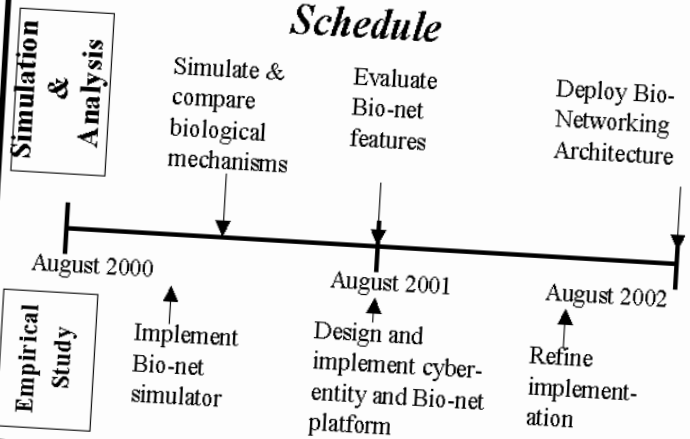
New Ideas

- Observation: large scale biological systems scale, adapt, and survive
- Apply biological concepts/mechanisms (e.g. emergent behavior, lifecycle, energy, evolution through diversity and natural selection) to future Internet applications
  - application constructed from collection of cyber-entities
  - cyber-entities have biological behaviors (e.g. migration, reproduction, death, energy exchange, etc.)
  - energy used as a control (and natural selection) mechanism
  - establishment of relationships for directory service

Impact

- Bio-Networking Architecture represents a new paradigm in the construction of network services and applications
- Applications constructed using the Bio-Networking Architecture meet the key requirements of NGI (adaptable, evolvable, secure, survivable, scalable, and simple).
- Example applications:
  - scalable and adaptive information dissemination
  - targeted and measurable advertisement delivery system using deeply embedded and wearable computers
  - fully distributed resource discovery for mobile and replicated objects

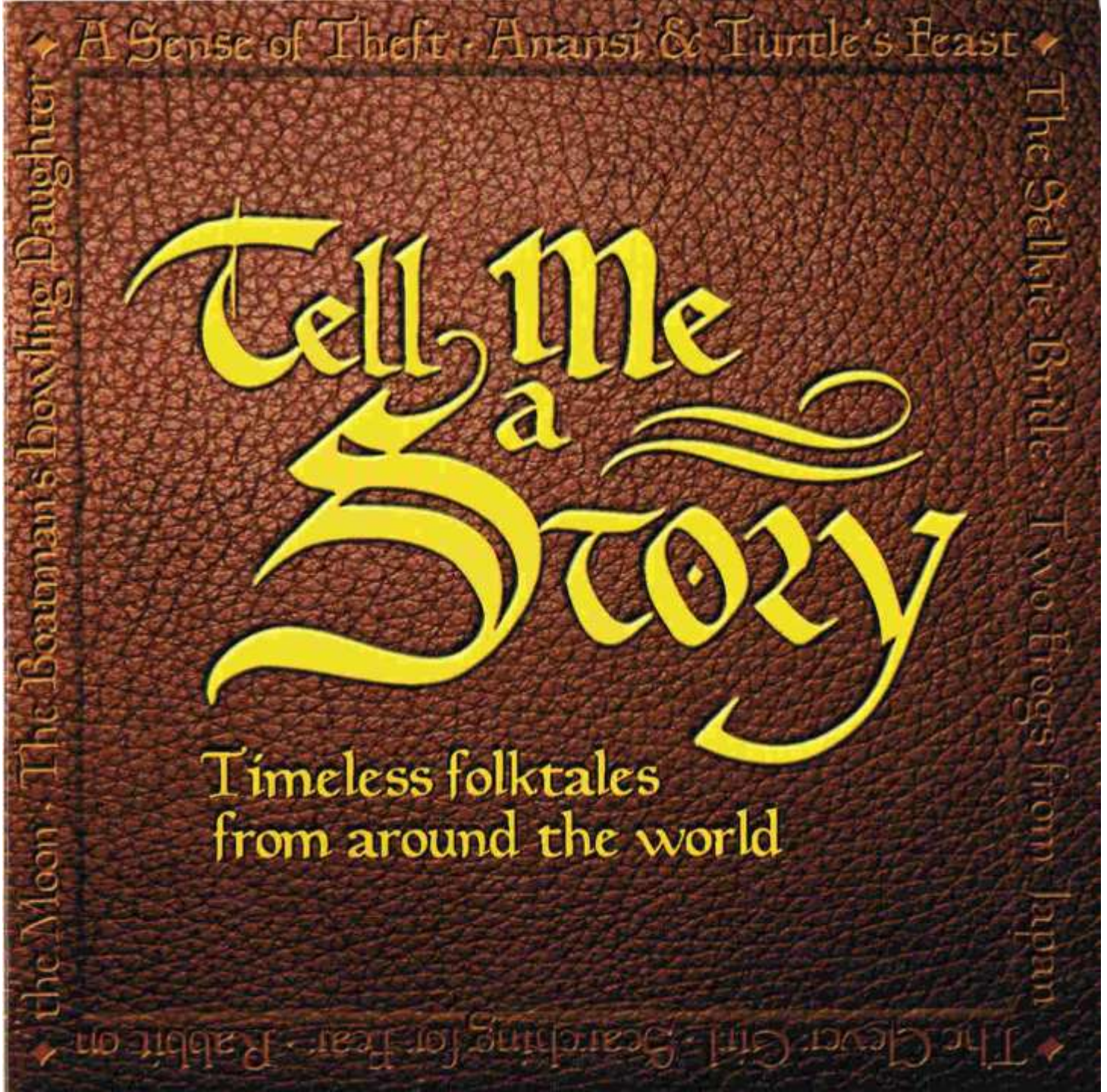
Schedule



PI: Tatsuya Suda, University of California, Irvine

Caveat: Non-oral-presentation uses of PowerPoint

1. Why should I care?


A Sense of Theft · Anansi & Turtle's Feast
The Selfish Bride · Two Frogs from Japan
The Clever Girl · Searching for Bear · Rabbit on the Moon · The Boatman's Howling Daughter
Tell Me a Story
Timeless folktales
from around the world

2. Convince - Make your argument

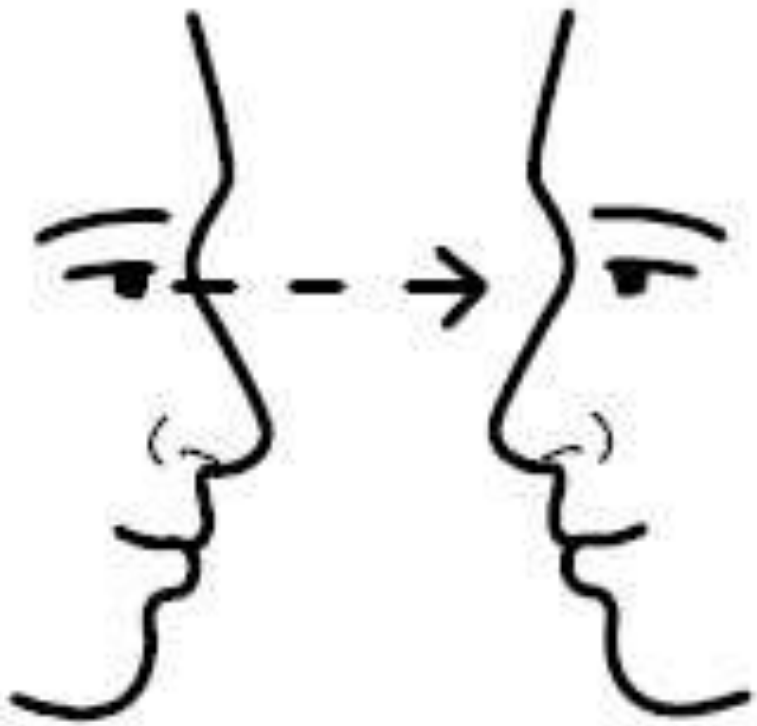
3. You lead, not the slides

4. Use slides for visuals, not text

1

5. One point per slide

6. Use dynamic voice and gestures

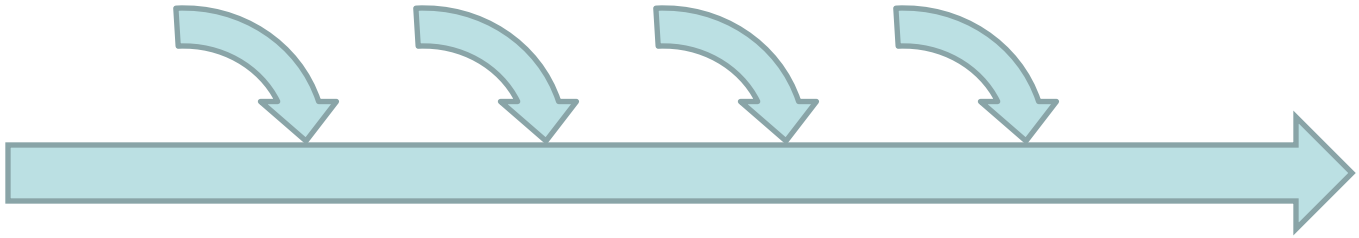


7. Make eye contact

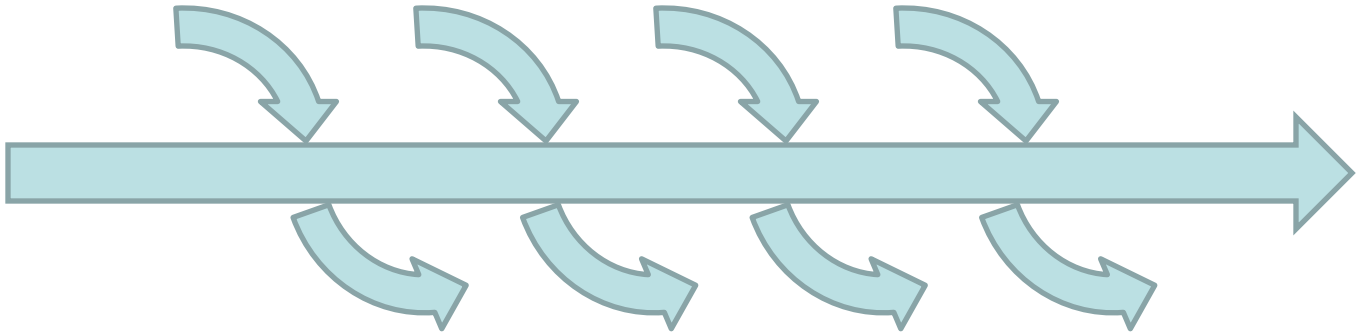
8. Use props

9. Engage the audience

10. How to dress? Avoid distractions



11. Have multiple Entry points

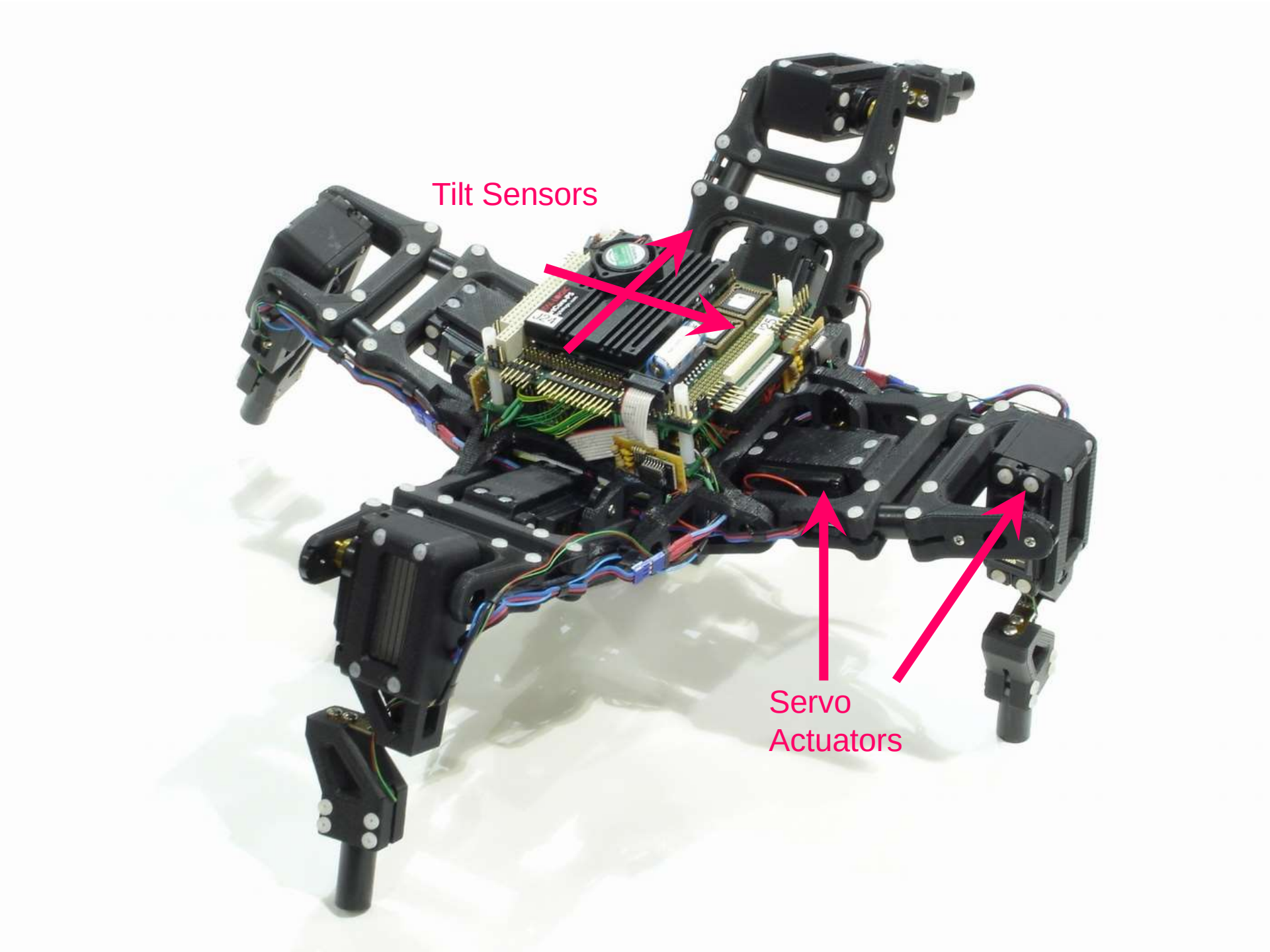


11. Have multiple Entry/Exit points

13. Never Apologize

14. Walk into the audience

15. Use a Clicker

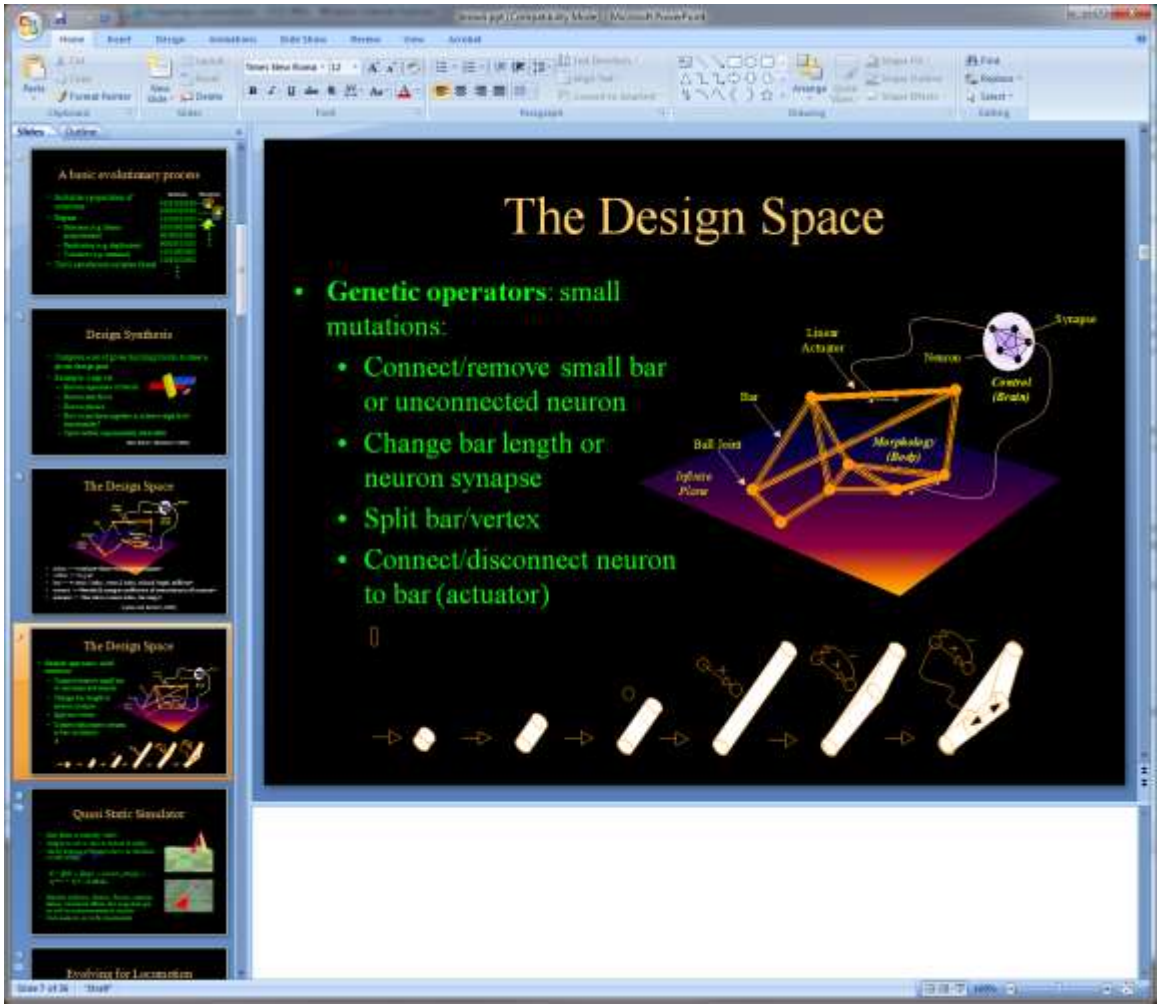

Tilt Sensors
Servo
Actuators

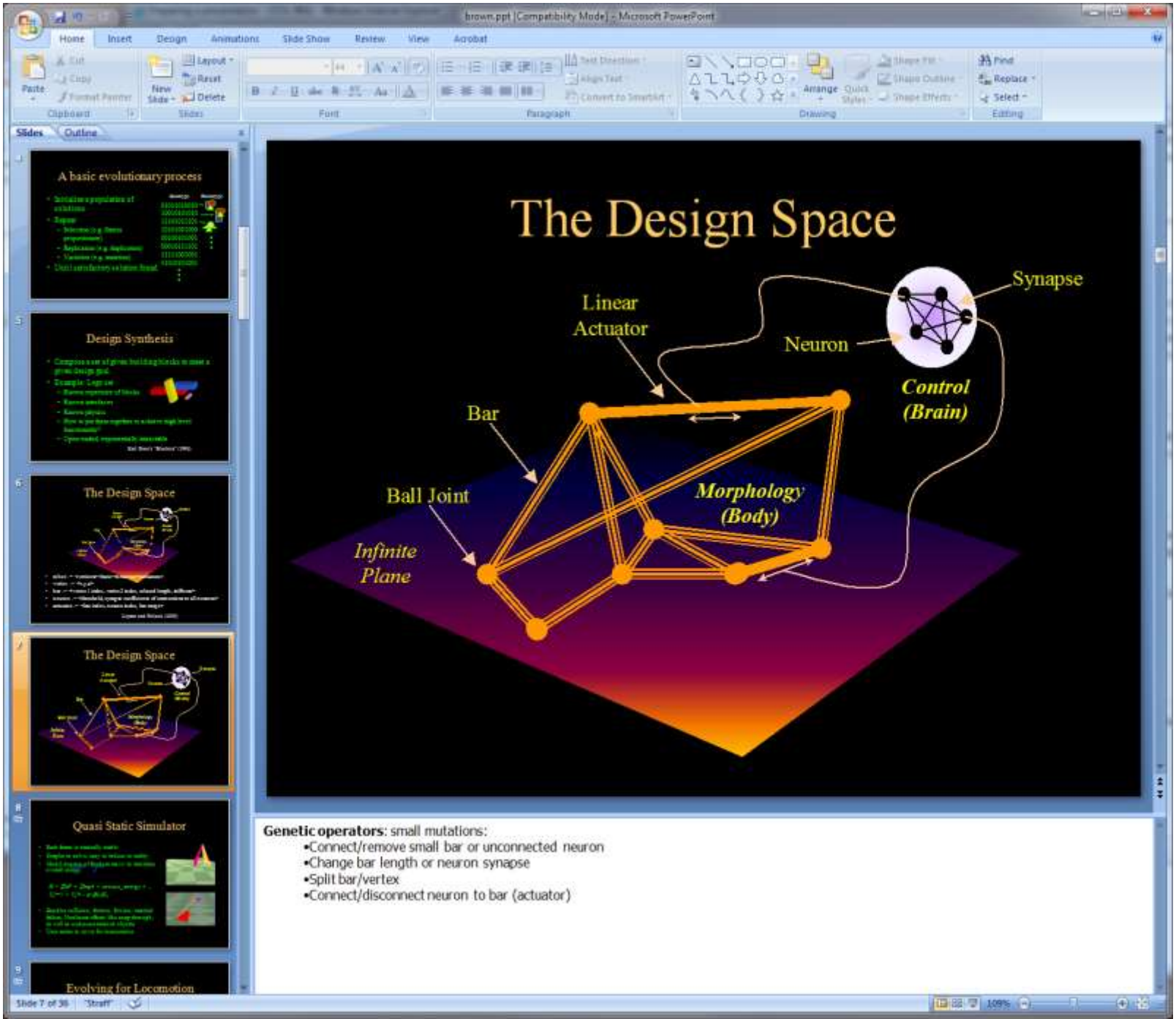
Print Anything

16. Simple concluding message

17. Practice

How to remake your slide




brown.ppt [Compatibility Mode] - Microsoft PowerPoint
Home
Insert
Design
Animations
Slide Show
Review
View
Acrobat
Slides
Outline
A basic evolutionary process
Design Synthesis
The Design Space
The Design Space
Quasi Static Simulator
Evolving for Locomotion
The Design Space
Synapse
Linear Actuator
Neuron
Control (Brain)
Bar
Ball Joint
Morphology (Body)
Infinite Plane
Genetic operators: small mutations:
•Connect/remove small bar or unconnected neuron
•Change bar length or neuron synapse
•Split bar/vertex
•Connect/disconnect neuron to bar (actuator)

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Home Insert Design Animations Slide Show Review View Acrobat

Slides Outline

1 A basic evolutionary process

5 Design Synthesis

6 The Design Space

7 The Design Space

8 Quasi Static Simulator

9 Evolving for Locomotion

The Design Space

Genetic operators: small mutations:

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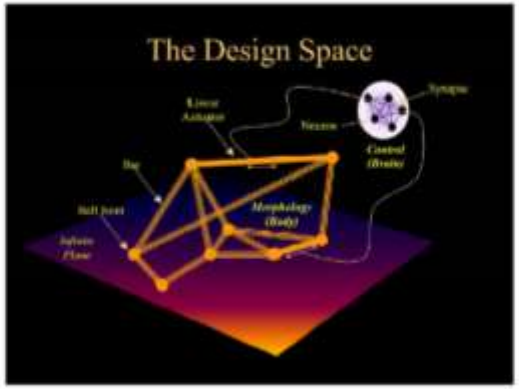
Slide 7 of 36 "Straff"



Genetic operators: small mutations:

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Notes page

People Judge you on your Performance

Terri Sjodin

“OK” is not OK

Terri Sjodin

Make your points

Terri Sjodin

Don’t rely on your Slides

Terri Sjodin

Gesture: Use body language

Terri Sjodin

Eliminate Distractions

Robert Gedaliah

Cut The Words Out

T J Walker

Don’t read from your slides

T J Walker

Don’t turn your back

T J Walker

Focus on Message
Don’t worry about the questions

T J Walker


SpeakCast

Making Mistakes

T J Walker

One Thing At A Time

T J Walker

Too Many Numbers

T J Walker

"Speaking" with TJ Walker

What to Do With Your Hands

T J Walker

L T

e aɔl Wv I

Without Your Slides

T J Walker