

# Video-abstracts for peer-reviewed publications Challenges and Chances for Researchers

Ludwig-Maximillians Universität München; 30.10.18

Jeanine Reutemann



## RESEARCHER LECTURER

Learning Experience Design

Filmmaking and Media Design

Research

Content Expertise

Interaction and App Design

### DIGITAL MEDIA PRODUCER I FILMMAKER

ETH Zurich; University of Zurich; Swiss National Science Fondation

















Jeanine

- Hinzufügen

Kanaleinstellungen

/ Teilen

Suchen





Autoplay (1)







♣ Download ▼

... Mehr

#### Nächstes Video



#### MOOCs on BBC Newsnight

Bernard Horan 1.793 Aufrufe



#### MOOCs - something needs to be done!

Jeanine 156 Aufrufe



#### MOOCs und Bildung: Neun gelernte Lektionen

Jörn Loviscach 3.380 Aufrufe



## What is a MOOC?



dave cormier 541.284 Aufrufe



#### MOOCs Turn 4: What Have We Learned

565 Aufrufe

2.322 Aufrufe



#### rotein basics

#### Outline:

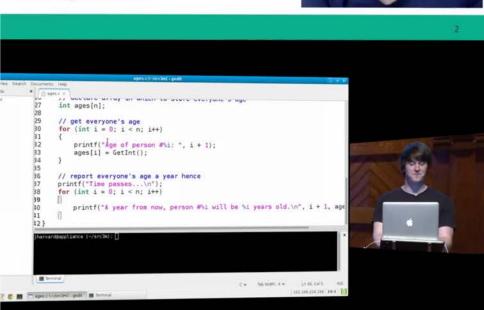
- · Polymers of amino acids
- · Order specified by bases in mRNA
- · Fold spontaneously into catalytic structures, driven by hydrophobic effects and hydrogen bonds

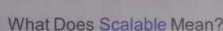
#### earning Objectives:

- Describe protein 1° and 2° structure
- Relate to gene structure









#### Operationally:

1,10061 M

- In the past "Works even it data doesn't fit in main memor

A CONTRACTOR

- Now "Can make use of 1900s of cheap computers"

#### Algorithmically:

- In the past If you have N data items, you must do no more than Nº operations - "polynomial time algorithms"
- Now If you have N data Items, you must do no more than W/k operations, for some large &
  - · Polynomial-time algorithms must be parallelized
- Soon. If you have N data items, you should do no more than N \* log(N) operations
  - . As data sizes go up, you may only get one pass at the data
  - . The data is streaming you better make that one pass count
  - . Ex: Large Synoptic Survey Telescope (30TB / night)

# VIDEO-ABSTRACTS

## **VIDEO-ABSTRACTS**

«Movie trailer of research.»

«Video abstracts drive readers to the full-text article.»

«Hundreds of journals allow authors to submit a video abstract, i.e., a short video describing their research, along with their article. Consequently, results of scientific experiments are now appearing on YouTube and attracting a larger audience.»

Math. Z. 127, 10-16 (1972) © by Springer-Verlag 1972

#### Galerkins Lösungsnäherungen bei monotonen Abbildungen

Friedrich Wille

#### § 1. Approximation bei stark monotonen Operatoren

Gar mancher hatte Mühe schon mit seiner Lösungskonstruktion. Drum haben wir uns ausgedacht wie man es mit Galerkin macht.

X sei reeller Banachraum, der außerdem, sonst klappt es kaum,

in uns'rer mathemat'schen Fabel

ist reflexiv und separabel.
Die Dimension ist endlich nicht,
sonst wär' zu einfach dies Gedicht.
Mit X\* wird, wie wohlbekannt,

Aus diesem folgern wir nun schon: Zu jedem n als Dimension

der konjugierte Raum benannt.

gibt's einen Raum  $E_n$  in X mit folgenden erlaubten Tricks:

 $E_1 \subset E_2 \subset E_3 \subset \cdots$ ,  $\bigcup_{n=1}^{\infty} E_n = X$ .

Nun sei der Operator T,

 $T: X \to X^*$ 

den ich als stetigen versteh', im Folgenden stets monoton, das heißt (wir kennen dieses schon):

 $\forall x_1, x_2 \in X:$   $\langle T(x_1) - T(x_2), x_1 - x_2 \rangle \ge 0.$ 

 $\langle \mathbf{r}(x_1) - \mathbf{r}(x_2), x_1 - x_2 \rangle$ 

Wir wissen dabei aus Erfahrung: die Winkelklammern sind die Paarung:

 $\forall v \in X^* \ \forall x \in X : \langle v, x \rangle = v(x).$ 

Stark monoton ist unser T, wenn Folgendes erfüllt ich seh':

 $\exists \alpha > 0 \ \forall x_1, x_2 \in X$ :

 $\langle T(x_1) - T(x_2), x_1 - x_2 \rangle$ 

# Stories to tell – Storytelling



00:00:00

Introduction Methods Results Discussion Conclusion

00:00:00	00:05:00			
•				
Introduction	Results	Discussion	Conclusion	Methods

00:00:00

Introduction

Pro/Con's > Examples

Further Thoughts

00:05:00

00:00:00

00:05:00

Results

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## Transformational Process for Video-Abstract

## 1. Body of Knowledge

Re-formatting written texts; condense; interweave; contextualize; adaptation; rewrite; show, don't tell;

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Performance; characters; surrounding spaces; image-sound rhetoric's; visual argumentation; but also ambiguity of images;

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Storytelling; narration; time-space element; rhythm; film = conflict;

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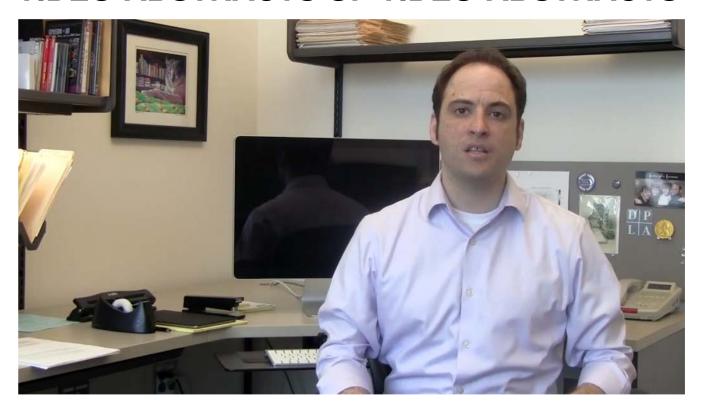
### 5. Playful Approach

Filmmaking is such an intense work; you have to enjoy it!

# TRADITIONAL ACADEMIC PUBLICATIONS



## **VIDEO-ABSTRACTS OF VIDEO-ABSTRACTS**



SCOTT SPICER: EXPLORING VIDEO ABSTRACTS IN SCIENCE JOURNALS. 2014.

# TRADITIONAL ACADEMIC PUBLICATIONS



Who's your target group?

- Peers (closed cricle)
- Wider discipline
- Inter- or transdisciplinary range
- Professionals
- Popular science
- All ages





# VISUAL (LANGUAGE)

"David Attenborough emphasised the epistemic power of film-making [...]: 'We were able, for instance, to put together views of living amphibians which no one had been able to see in that range of time ever. No zoo could show you that amount. The visual effect was devastating'»

NICHOLAS WHAPSHOTT: »THE PERFECT TEACHER, BACK WITH ANIMALS», IN: THE TIMES VOM 1. MÄRZ 1980: 14., CITED IN: JEAN-BAPISTE GOUYON: »SCIENCE AND FILM-MAKING», IN: PUBLIC UNDERSTANDING OF SCIENCE 25.1, 2016: 33.



## For scientific video-abstracts:

Not only *visualization*, but epistemic qualities of the audiovisual medium Signs, Arguments, Examples (Aristoteles)
#demonstrate #visualize
#document #visualproof



# VISUAL

- 1. Standard Moving Images
- 2. Slow-Motion / Time Lapse / Macro
- 3. (Moving) Photographs
- 4. Animations: Stop-Motion, Drawings, 3D, Motion Tracking, ...
- 5. Written Text: In the image / Part of the image / Overlay / Subtitles

**Camera Technology** 

**AND** 

**Image Aesthetics** 





**Camera Technology** 

# **AND**

**Image Aesthetics** 



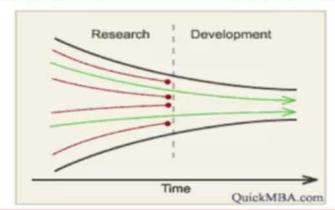






#### **Closed Innovation Model**

- Recruit top talent for internal R&D
- Innovate only within firm's boundaries
- Filter internal ideas for defined market



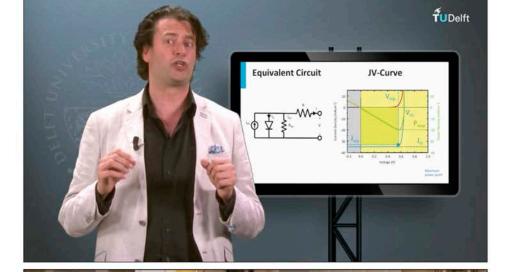








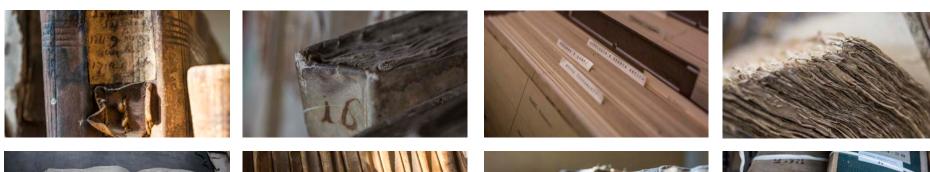
### Topic Discipline Speaker

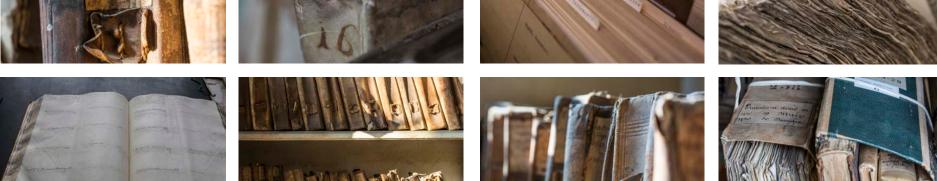
















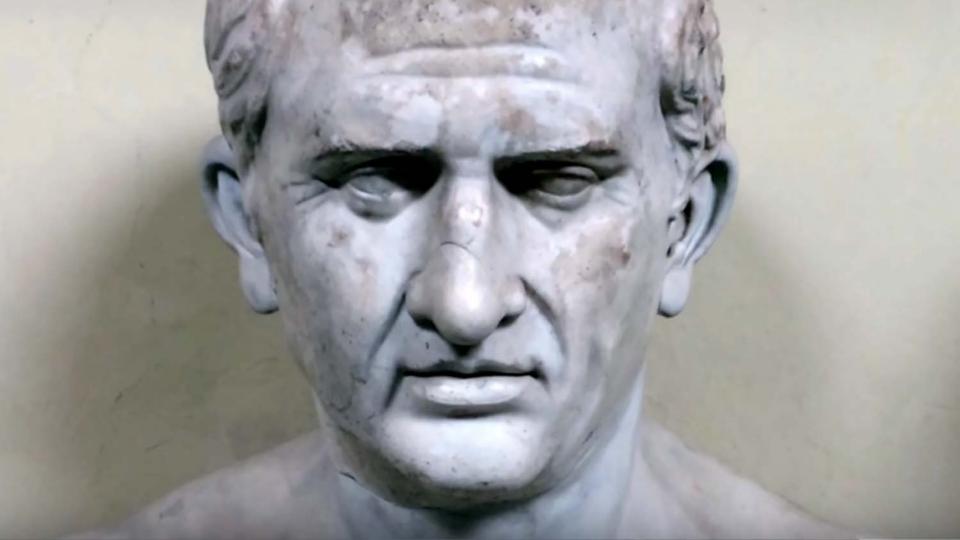


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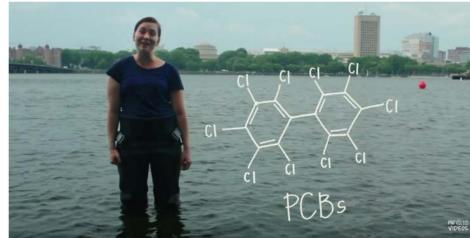


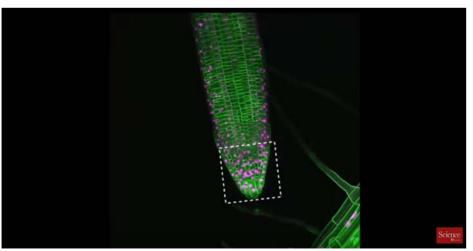
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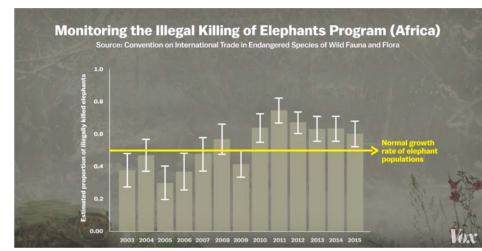


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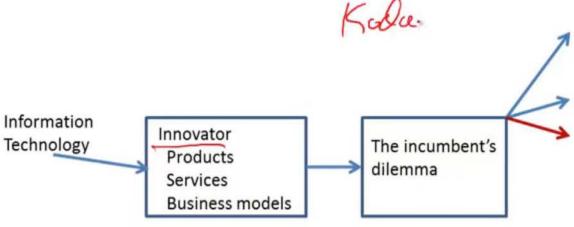
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Written Text in Video ≠ Written Text in Video



#### **Surviving Disruptive Technologies**





Morph business model to accommodate competition and new opportunities

Abandon existing business model and adopt a new one

Failure: merger, buyout, liquidate

Denial

History

Resistance to change

Mind set

Brand

Sunk costs

Profitability

Lack of imagination

A Survivor Model



**TELEVISION REVIEW** 

## Plant Lore for Those Who Lack Patience

By WALTER GOODMAN

Time-lapse photography is the star of David Attenborough's new sixhour series, the first half of which will be shown tonight at 8 on TBS. By speeding up the workings of nature, packing into brief seconds long months of change, "The Private Life of Plants" reveals the ingenious ways that growing things go about spreading their seed. The unfolding of a flower, which takes months, occurs in a beautiful few moments. Rooted though the plants are, they do an astounding amount of traveling.

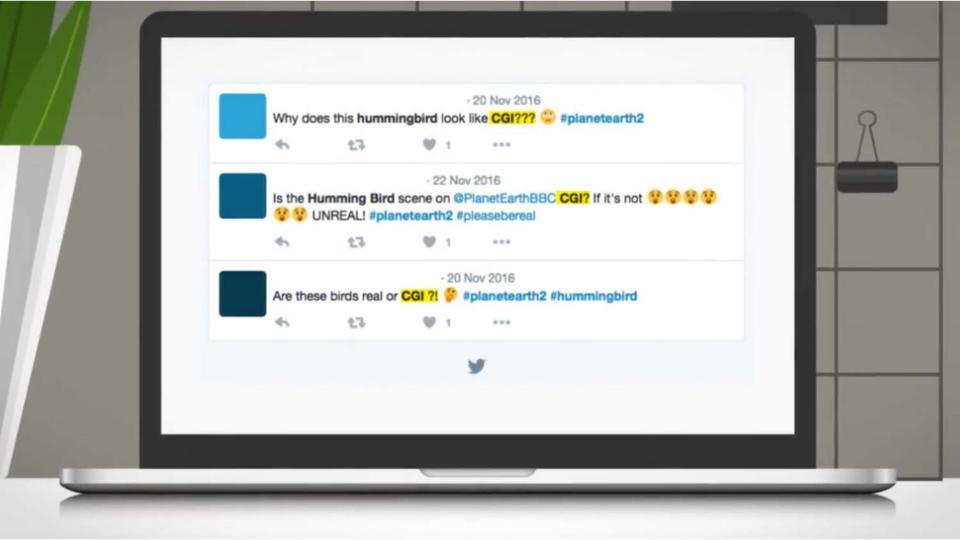
In the opening hour, "Branching Out," an understandably breathless Mr. Attenborough zips around the world on the track of the gliding, rolling, diving, swooping, whirling, squirting, bouncing, parachuting, exploding plants. Hitching rides by wind and water, the plants travel for miles. Watch that agitated bramble

From seed to flower in a matter of moments.

about sending forth and protecting their leaves, and the third, "The Birds and the Bees," goes into the vigorous and sometimes predatory sex life of apparently innocent flora. In the concluding three hours tomorrow night, Mr. Attenborough tells of the ways plants deal with disasters like fires and hurricanes, the symbiotic liaisons of plants and animals, and the ability of plants to survive in the most off-putting conditions, from Arctic wastes to desert sands. The foe that gives them the most trouble, Mr. Attenborough notes, is, of course, the human being.



David Attenborough in a pond along the Virginia-North Carolina border, in





Benjamin Short Head of Graduate Placement and Recruitment Tata Steel

#### **IMAGE-SOUND RELATION**

Synchrese

«forging of an immediate and necessary relationship between something one sees and something one hears at the same time.»

MICHEL CHION: AUDIO-VISION: SOUND ON SCREEN, 1994.

# AUDIOVISUAL (LANGUAGE)

1. Voices: On-Screen, Off-Screen, Voice-over

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- 2. Sound Elements: Foley, Sound Elements

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- 3. Atmosphere: Surroundings Spaces





- 1. Voices: On-Screen, Off-Screen, Voice-over
- 2. Sound Elements: Foley, Sound Elements
- 3. Atmosphere: Surroundings Spaces
- 4. The Power of Music

Be generous. Kill your darlings. Film making is never a oneman show If you do not want to collaborate, go run a marathon.

## **KEY TAKEAWAYS**

- 1. Practice. Start to use/re-use/produce re-produce/remix audiovisual data for your research
- 2. Find your personal style: design can support or hinder your videocontent
- 3. Video ≠ Copy. Media design knowledge meets scientific knowledge: Transformation!







The manifesto is published under a CC-BY-SA Licence.



























Presentation available on: audiovisualresearch.org

Manifesto Videos in Higher Education: medium.com

Jeanine Reutemann jeanine@audiovisualresearch.org



## 15:00 Q & A

15:15 How to start? (incl. grouptask)
16:15 Individual Meetings

# Why video?

Why video-abstracts?

#### LEARNING EXPERIENCES AS STORYTELLING

Stories create a more immersive learning experience. Spend more time on creating a narrative storyboard and script based on the content, examples or argumentations. There are few good videos without a (at least decent) storyboard.



Yes: helps with a clear red thread No: you're the expert, embodied knowledge

> Script (yes and no)

- > Script (yes and no)
- Yes: helps with a clear red thread
- No: you're the expert, embodied knowledge

- > Storyboard (yes!)
- > supports the development of a narration, choice of images, creative design...

#### **Preproduction**

Definition of target audience, genre, format, technical equipment, workplan (times, deadlines, work steps, tasks), roles, organization of production, script writing, production plan, research on similar films, access to existing material, search for copyright-free material and historical material.

#### **Production**

The actual production process

#### **Postproduction**

Montage, titles, translations, subtitles, 'lower thirds', (maybe) animations, visual effects, color grading, voice-over texts and recording, sound design, music, sound mix, end credits, rendering.

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# **VIDEO-ABSTRACT HOW TO START?**

### Welcome... In this study...

#### Exploring Video Abstracts in Science Journals: An Overview and Case Study

Spicer, S. (2014). Exploring Video Abstracts in Science Journals: An Overview and Case Study. Journal of Librarianship and Scholarly Communication 2(2):eP1110. http://dx.doi.org/10.7710/2162-3309.1110



#### THE FIRST 5 SECONDS

Create an audio/visual hook









LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

#### **PROOF OF EXPERTISE?**

Authorship; Affiliation; Team; Discipline







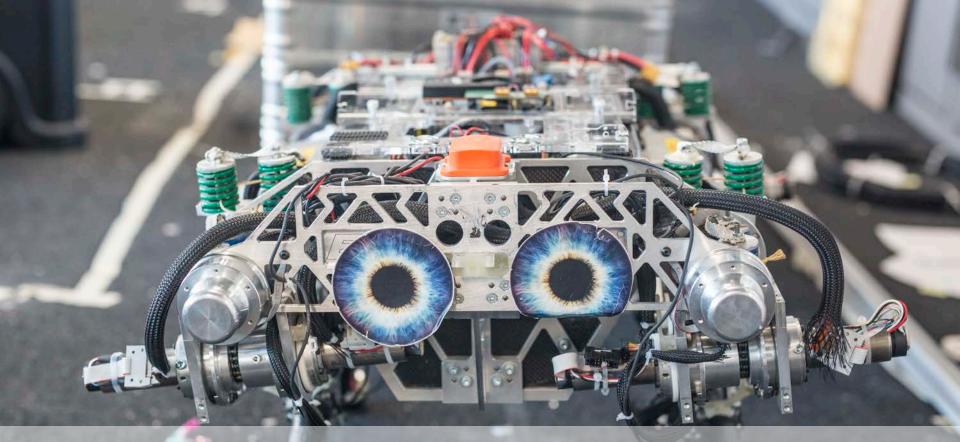
#### **DATA COLLECTION**

Expert Interviews; Field Work, Laboratory Shots, Experiment Documentation



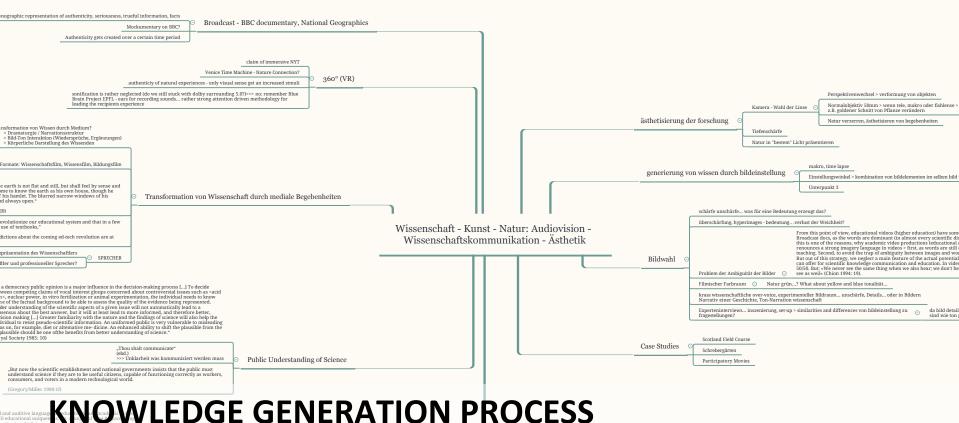
#### **KNOWLEDGE GENERATION PROCESS**

Raw Observations; Prototypes; Notations; Sketches, Drafts; Thought Experiments



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Raw Observations; Prototypes; Notations; Sketches, Drafts; Thought Experiments

on-focus-driven approach (e.g. fast montage) in their visual and d do not engage a recipient in a interactive way, but leave him in

Development of audiovisual language for science communication



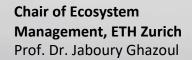
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#### **RESULTS**

Data Visualization; Statistics – Speaker (Aesthetic Difference?)

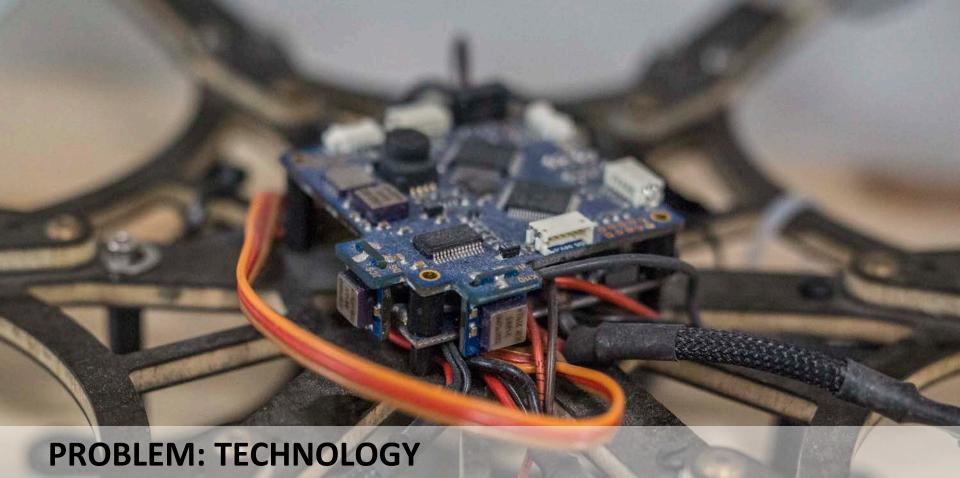


Case Study: Scottish Highlands



#### **DISCUSSION**

Show arguments; make visual connections; use sound scapes



Sustainability of Production

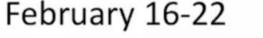


#### **AVOID IMAGE/SOUND REDUNDANCE**

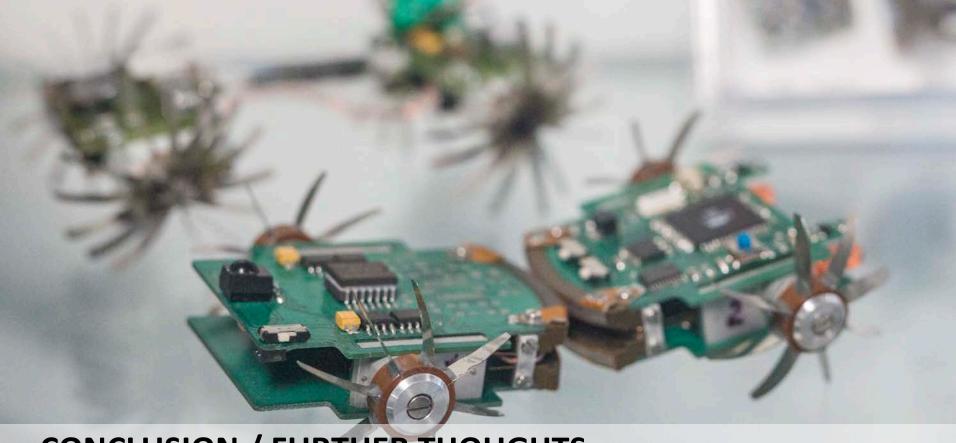
Human perception is multimodal!

#### Week 3

- This is the last week of module 1—which has focused on the nonprofit sector, nonprofit organizations and organizational governance.
- The focus this week is on the role and responsibilities of boards of directors in organizational governance.
- As in other weeks, the course wiki page contains the content, resources, and homework to complete by the end of the week.
- We will be drawing primarily from our SUNY Open Textbook, Guidelines for Improving the Effectiveness of Boards of Directors of Nonprofit Organizations. By now, you should have downloaded it for free from SUNY Open and iTunes.







**CONCLUSION / FURTHER THOUGHTS** 





#### THE FUTURE OF HISTORY

World-Wide-Publication; Shoulder of Giants; Infinite Archive



- Talking Head, voice-over (who?)

- Talking Head, voice-over (who?)
- Visual Styles (archive, photos, diagrams, animations, presentation slides, screencaptures...)

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### Team-up with colleague

- > 10min discuss about potential own approach
- > write down visualization styles

- Talking Head, voice-over (who?)
- Visual Styles (archive, photos, diagrams, animations, presentation slides, screencaptures...)
- Cl of University? Institution? (Typography, Colours)
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- Script (who writes it, who performs?)

- Talking Head, voice-over (who?)
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- Storyboard
- Technical Equipment

' (sec)	Scene 1	' (sec)	Scene 2	' (sec)	Scene 3				
Content / Text:		Content / Text:		Content / Text:					
Surrounding Space / Props:		Surrounding Space / Props:		Surrounding Space / Props:					
Other sounds:		Other sounds:		Other sounds:					
' (sec)	Scene 5	' (sec)	Scene 6	' (sec)	Scene 6				
						Content / Text:		Content / Text:	

## Fill-out prodution sheet and start storyboard

