
...and How to Make It for the SIGGRAPH Deadline

Christian Theobalt

Graphics, Vision, and Video



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ACM SIGGRAPH Conference

- **ACM**
- **Special Interest Group in Computer GRAPHics and Interactive Techniques**
- Regularly tops 20,000 attendees
- **Technical papers program** the prime venue for presenting most advanced research in graphics
- 20% acceptance rate, 500 submissions



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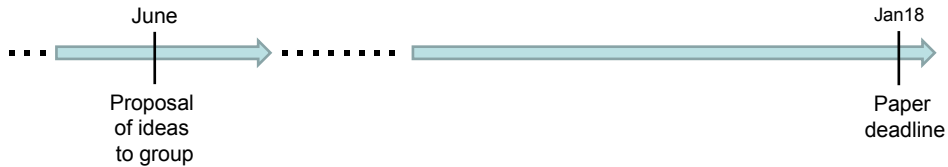
The Plan

Jan18
|
Paper
deadline

..... —————
All year: one-on-one meetings,
weekly group meeting

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The Plan



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Project Proposals

- Brief talk in group meeting

- 10 minutes
- Problem
- Main approach
- Expected significance:
Improvements over
state-of-the-art



[avu3a.org.uk]

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How to get Ideas ?

- Structured reading
 - SIGGRAPH, EUROGRAPHICS, CVPR, ICCV papers
 - Regular reading in group meeting
 - Reading plan in one-on-one meetings
 - [How to read a paper: see references](#)



- Conferences
 - Go to sessions that do not cover your core area of work
 - Keep a conference diary
 - I use a tablet PC, group wiki



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How to get Ideas ?

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How to get Ideas ?



Dagstuhl Seminar Computational Video 2009



Ramesh Raskar, MIT

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How to get Ideas ?

How to Invent? After **X**, what is ne**X**t ?



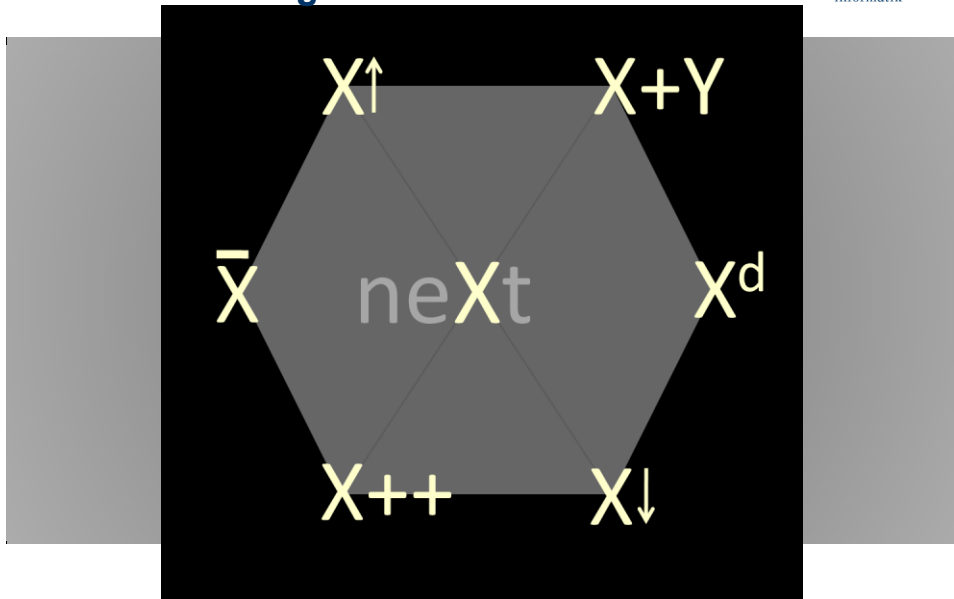
Dagstuhl Seminar Computational Video 2009



Ramesh Raskar, MIT

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The Idea Hexagon



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#1: $next = X^d$

Generalize to another dimension

Data \rightarrow Text \rightarrow Audio \rightarrow Images \rightarrow Video \rightarrow ..

Airbag for car to airbag for .. ?

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Image Inpainting → Video Inpainting



Criminisi et al.,
CVPR 2003

Simakov et al.,
CVPR 2008



Granados et al., ECCV 2012, EUROGRAPHICS 2012

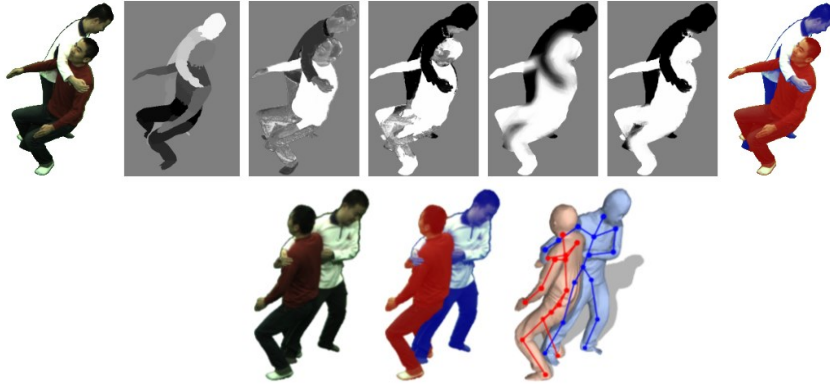
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#2: neXt = X + Y

Fusion of the Dissimilar

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X+Y

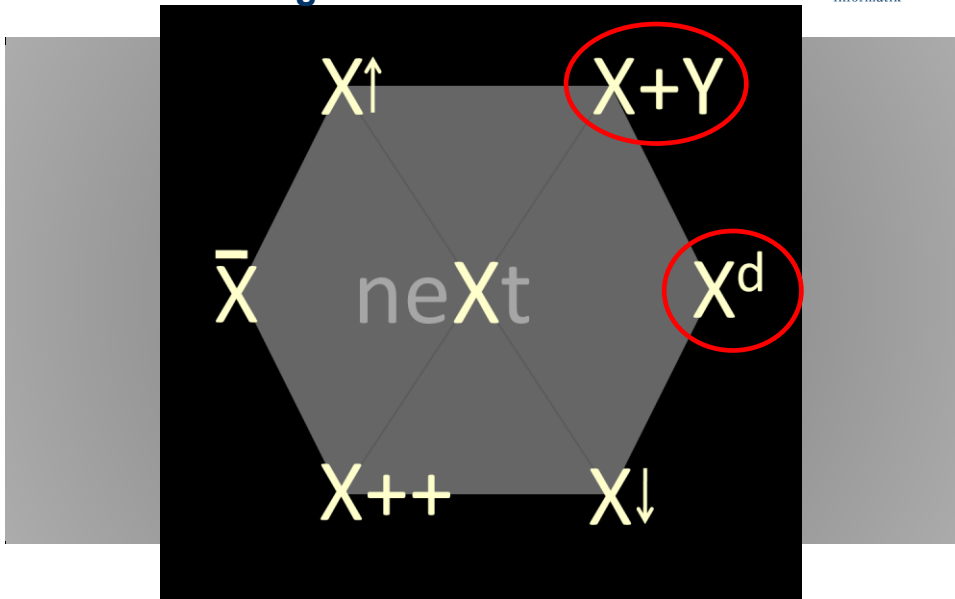


[Liu et al., CVPR 2011]

Integrating image segmentation and tracking →
multi-person performance capture

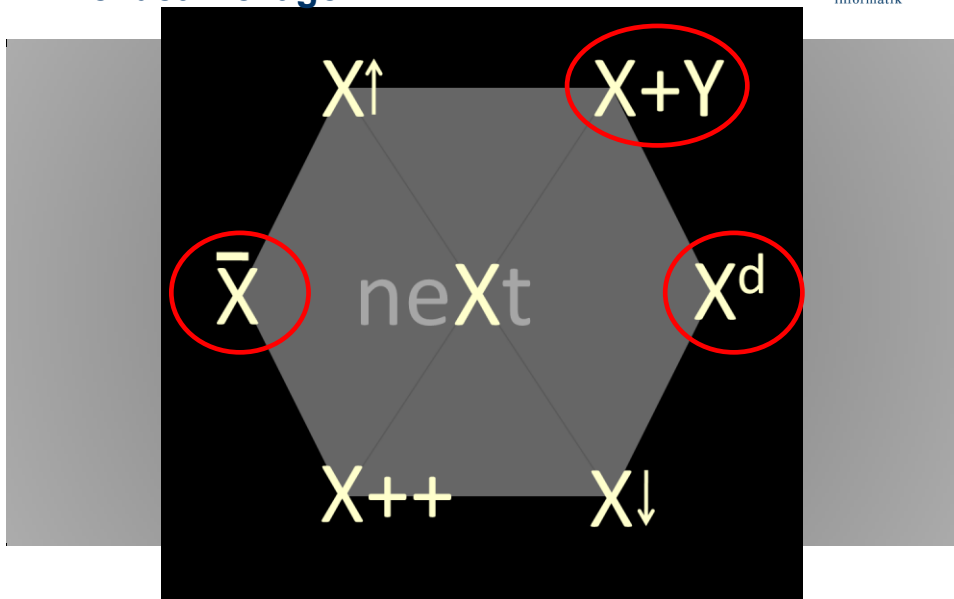
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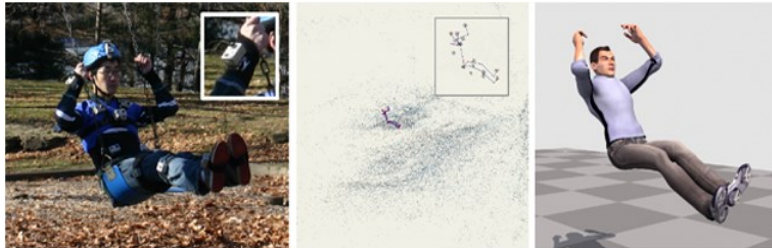


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#3: `neXt = \bar{X}`

Do exactly the opposite

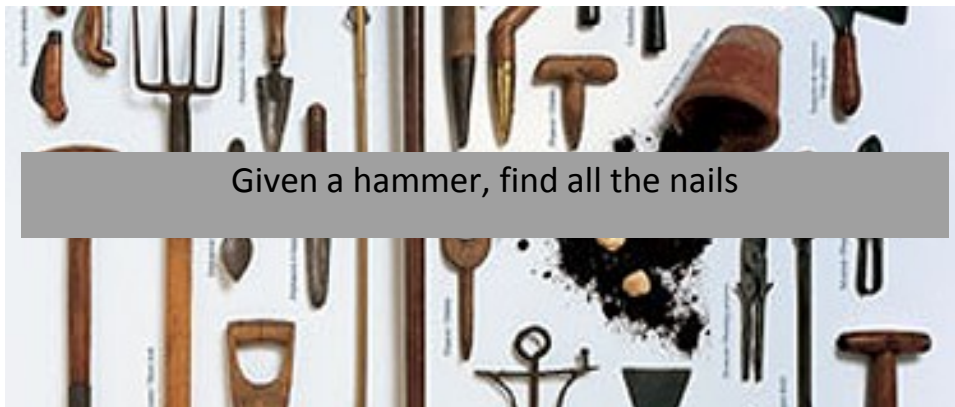
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Shiratori et al., Motion Capture from
Body Mounted Cameras, SIGGRAPH 2011

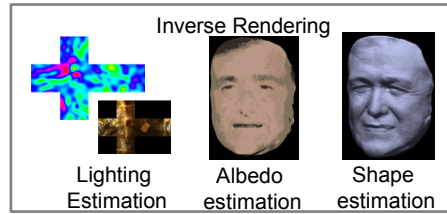
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#4: neXt = X↑

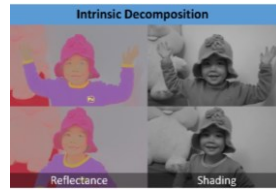


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$x \uparrow$



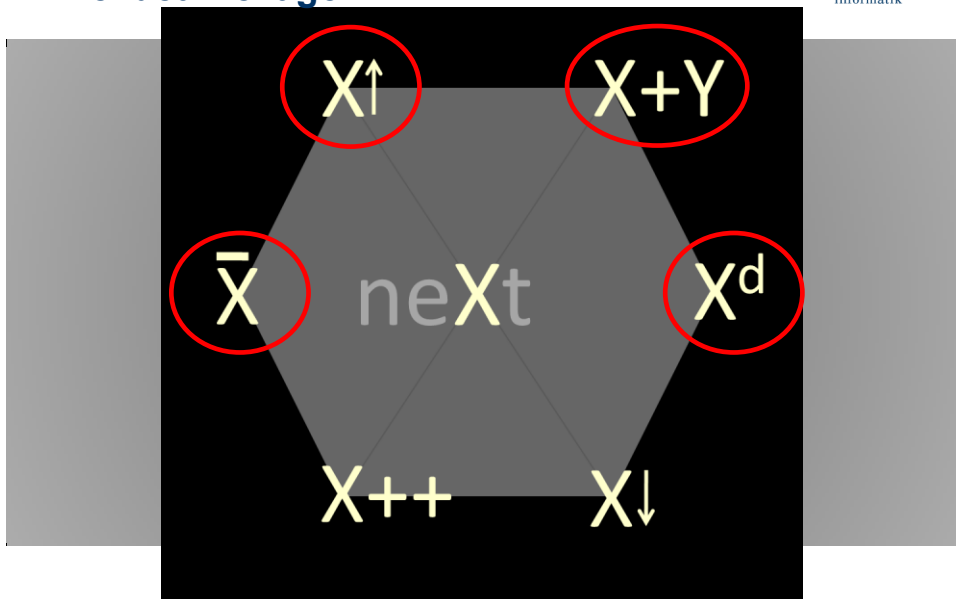
Relightable 3D Video
Li et al., EUROGRAPHICS 2013



Intrinsic Video Decomposition
Ye et al., SIGGRAPH 2014

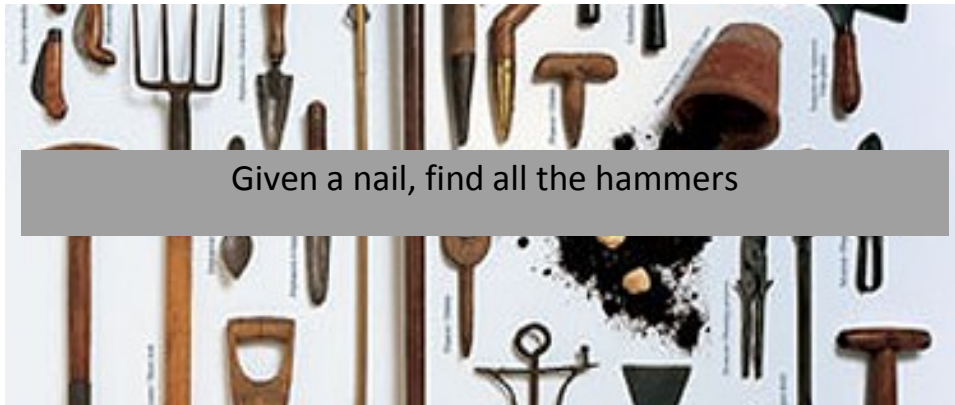
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The Idea Hexagon



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#5: neXt = X↓

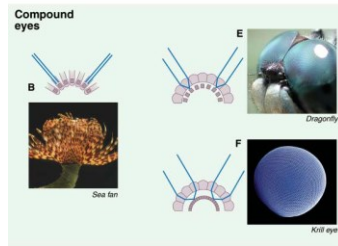


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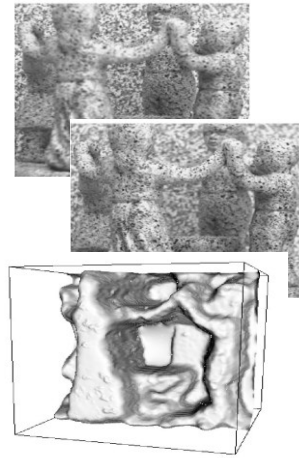
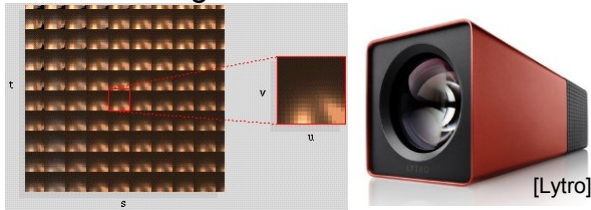
Digital Refocusing



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Ligt field camera



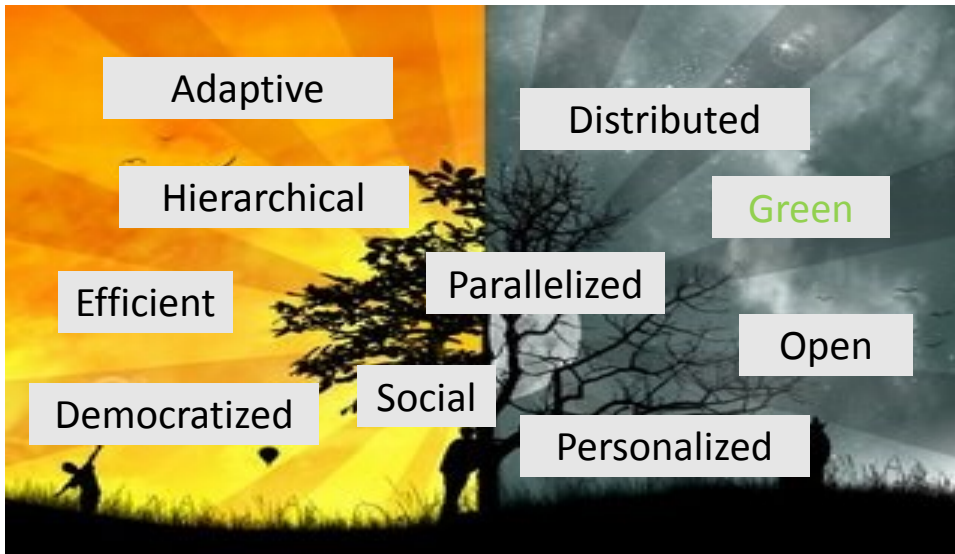
Fernald, Science 2006
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#6: neXt = X++

X + Adjective

The background of the slide is a sunset scene with silhouettes of people and a tree. The sun is low on the horizon, casting a warm glow over the scene. The silhouettes of people and a tree are visible in the foreground.

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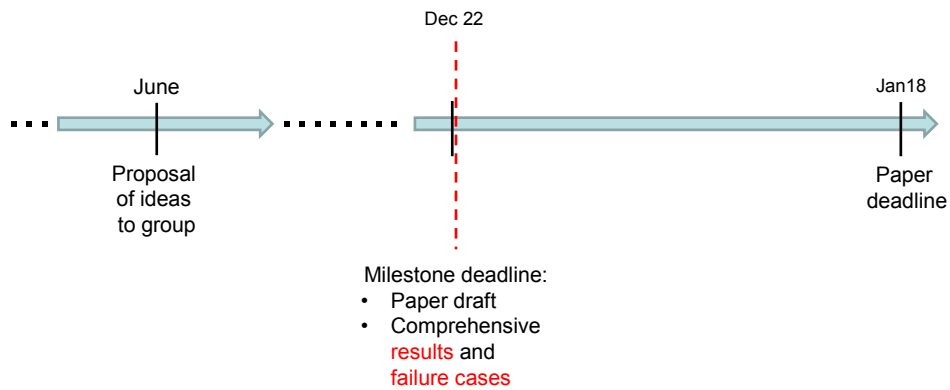
The Plan



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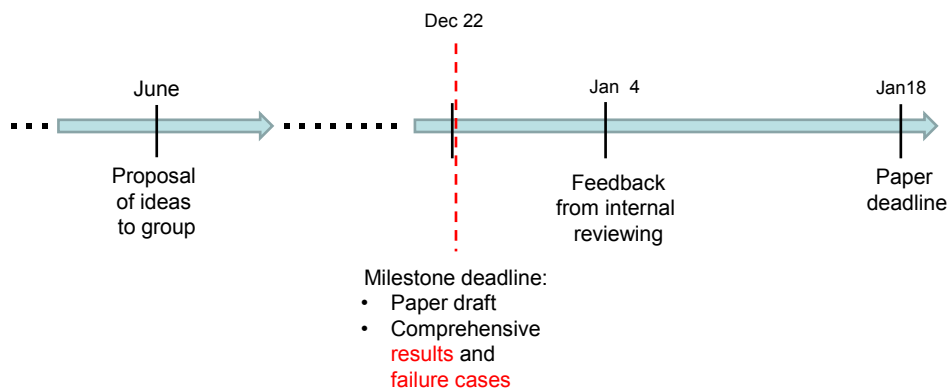
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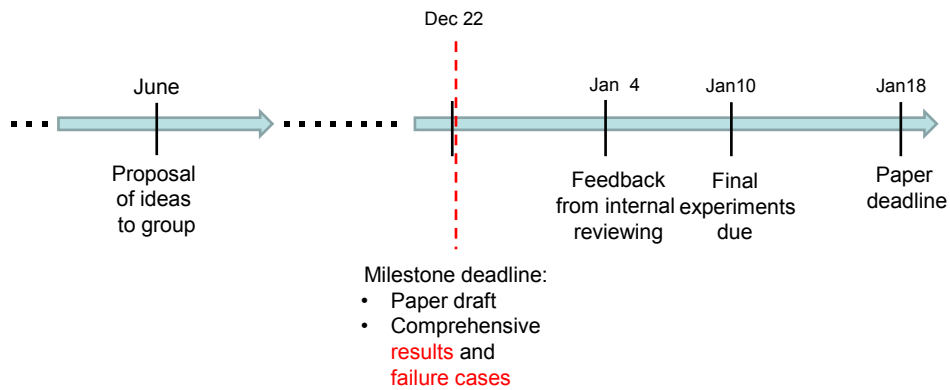
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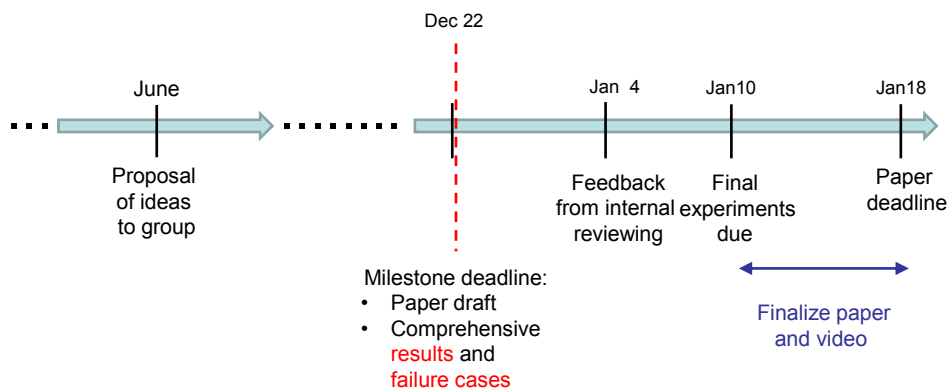
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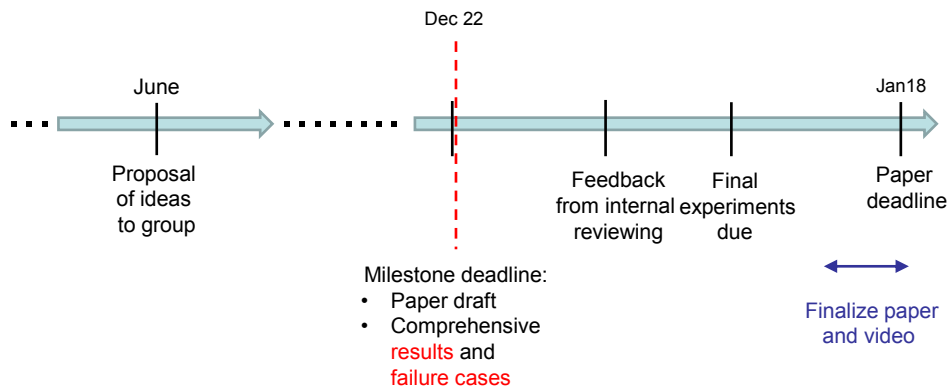
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Reality Check



All year: one-on-one meetings,
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Is it Worth It ?

- Aiming high with timeline in mind brings out the best in your work
- If successful – lasting impact of your results



- Is my work good enough ?
- Rather n papers at smaller venues than being rejected from SIGGRAPH and no other publications
- Other factors – funding, other responsibilities

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Thank You !



gvv.mpi-inf.mpg.de



www.thecapture.com

Thanks to:



ERC Starting Grant
CapReal

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Resources



- [Advice on How to Read Academic Papers](http://www4.ncsu.edu/~akmassey/posts/2012-02-15-advice-on-reading-academic-papers.html) by Aaron Massey
- [Reading a Computer Science Research Paper](http://pages.cpsc.ucalgary.ca/~pwlfong/Pub/inroads2009.pdf) by Philip Fong
- [How to Read a Computer Science Research Paper](http://uet.vnu.edu.vn/~chautm/cs-english/reading_guides/howtoreadacspaper.pdf) by A. Stent
- Ramesh Raskar, [The Idea Hexagon](#), TED Talk / SlideShare

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