

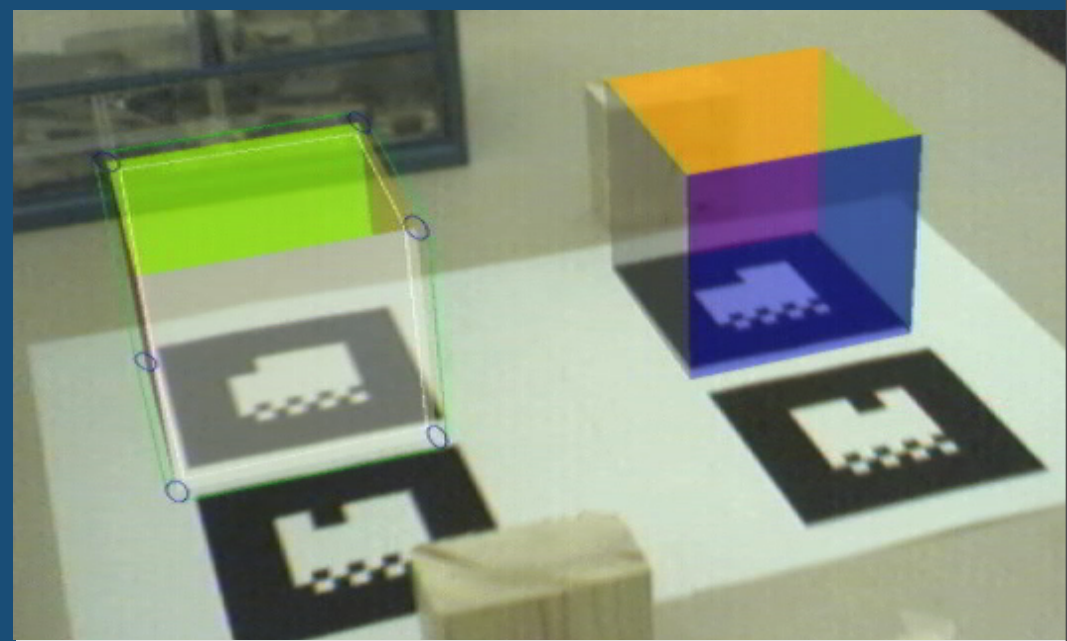
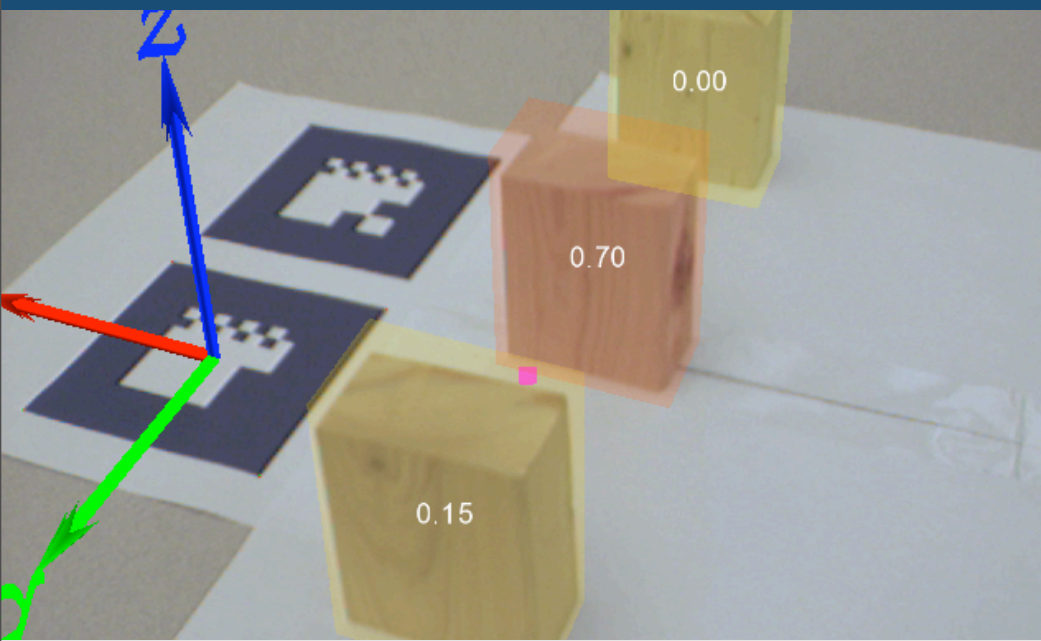
I Don't Need no New Technology, I Just Want to Meet the Production Quota

Enylton Machado Coelho
Lukas M. Marti



About me...

- Graduated Fall'05
- Dissertation: Spatially Adaptive Augmented Reality
 - Developed a toolkit that:
 - accounts for uncertainty and
 - supports the development of deployable AR applications



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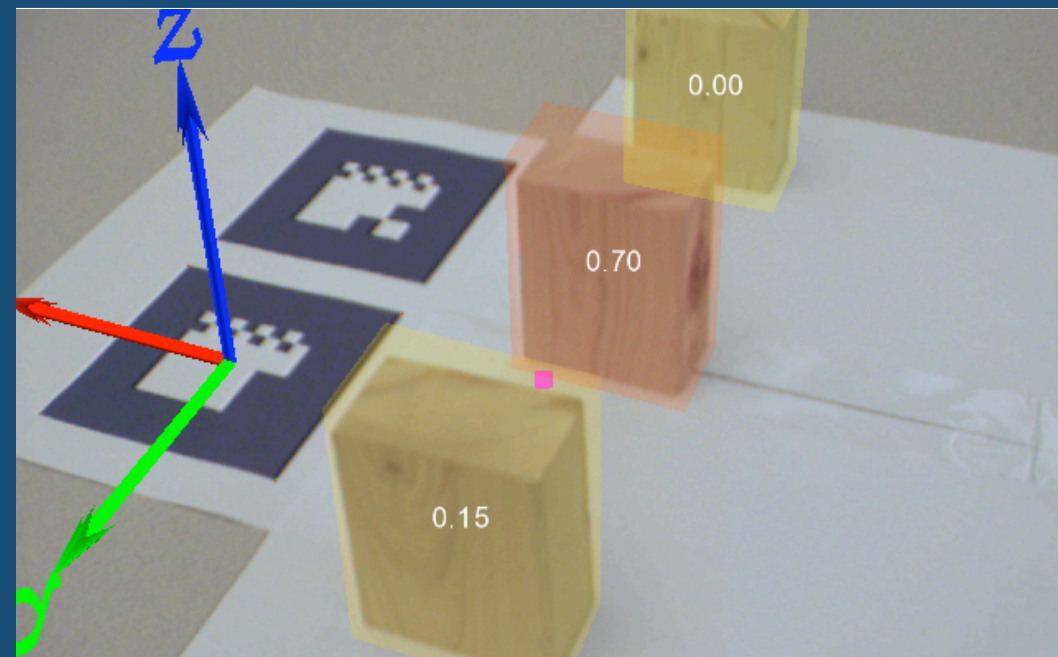
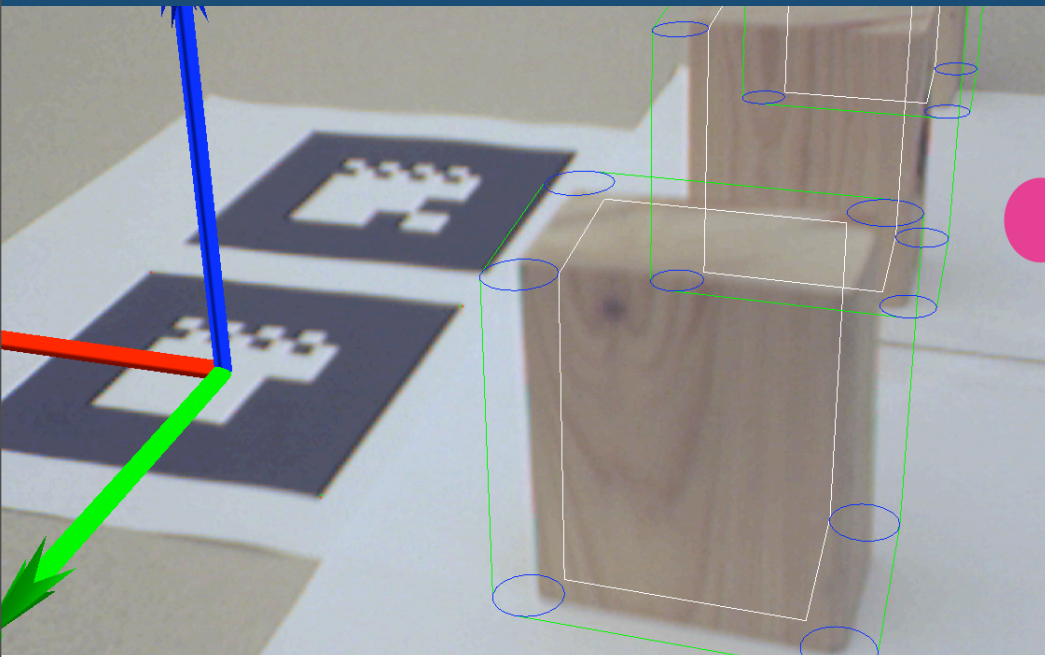
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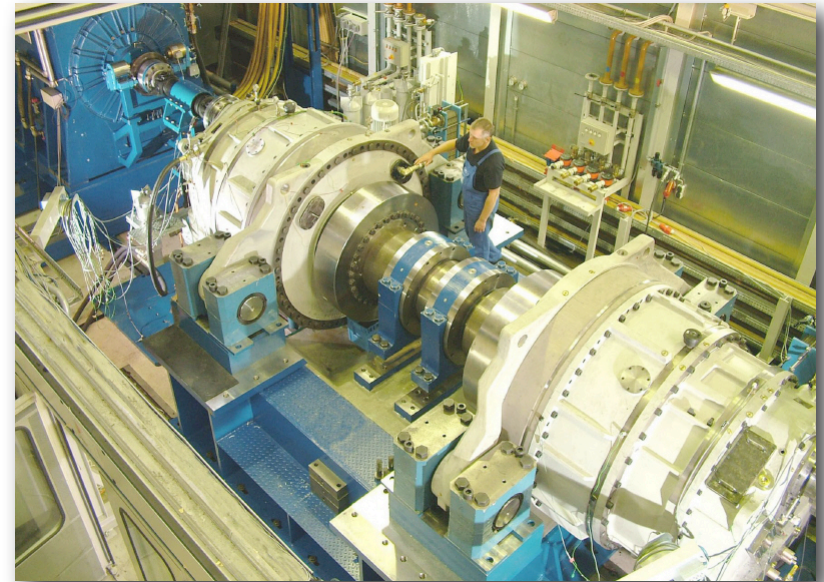
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Uncertainty Aware AR



- Account for uncertainties in the system
- Propagate it down to the screen
- Compute regions
- Provide the application developer an estimate

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- **Augmented Reality may**
 - provide ubiquitous information
 - support flexible production
- **Industrial environment presents technical challenges**
 - various tracking characteristics
 - noisy environment
 - temperature, static



The best technology is not always the winner...

- Video Recording
 - Betamax
 - superior video quality
 - proprietary
 - VHS
 - longer running time
- Operating System
 - Windows
 - cheaper hardware
 - easier to learn
 - Unix
 - technically superior
 - requires technical knowledge

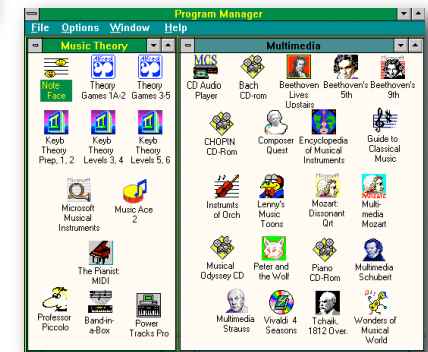


```
photo@one:~$ Shell No. 2 - Konsole
Session Edit View Settings Help
File Edit Options Buffers Tools Pen Help

# #confiq = get_confiq;
#site = "s/./?/";
#site = "" | #site on #site eq "localhost";
#warn "incoming host: #site";
#r->notes('static_host', #confiq->{static_host});

if (#site eq "www.perl.org") {
  warn "ps_string: ", #r->ps_string;
  warn "filename: ", #r->filename;
  warn "url: ", #r->url;
  #r->notes('url', #confiq->{url});
}

#confiq_cache = { #confiq->getall };
#set defaults: "normalize" configuration to array refs
#confiq_cache->{servername} | is hostname;
#confiq_cache->{static_host} = #confiq_cache->{servername};
#confiq_cache->{virtual_host} = [ ] | #confiq_cache->Sep 5 22:01:41
one sshd@pan_unix:[17428]: session opened for user drsrsync by (uid=0)
#ref #confiq_cache->{virtual_host} on "HBRV";
5 22:01:40 one sshd@pan_unix:[17428]: session closed for user drsrsync
#confiq_cache_at_line = # #confiq_file;
#confiq_X(#confiq_cache)
```



Relevant Industry Issues

- **Robustness**
 - **temperature, steam, lighting conditions, etc.**
- **Transition to New Technology**
 - **equipment, business practice, etc.**
- **Acceptance & Training**
 - **supervisors don't want to change a "running system",**
 - **workers need to be trained**



Research-Industry Gap

- **Research**
 - explore new technologies and look far ahead into the future
 - not constrained by very stringent boundaries
- **Industry**
 - driven by consumer demands,
 - revenue needs, cost and value
 - standards and regulations
 - hard deadlines

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How to bridge the gap between the constraints of industry and the expectations and challenges of research?



- **Comprehensive, long term vision**
 - **NSF proposal**

- **Short term, easily transferable technology**
 - **Industry**

