

- **Introduction**

- Code of Conduct
- Communication -- Miro and Zoom Chat
- Introduce Arty Starr and Dr. Margaret-Anne Storey
- Follow Arty on mastodon (@art3starr@mastodon.social) and Dr. Storey on twitter (@margaretstorey) - switching to mastodon (@mastorey@mastodon.acm.org)


- **Discussion led by Arty Starr and Dr. Margaret-Anne Storey**

- The paper is available at:
<https://dougengelbart.org/content/view/348/> Or pdf: <https://dougengelbart.org/pubs/papers/scanned-original/2002-augment-133320-Improving-Our-Ability-to-Improve-eic11.pdf>

- **Wrap**

- Thank you Arty Starr and Dr. Margaret-Anne Storey and Everyone!
- Continuing the discussion: discord
- Next paper Monday Oct 2: The Real World of technology, Ursula Franklin (led by Yvonne Lam)
November paper: Suggestions!
- Follow #PapersInSystems on mastodon





Miracle of
the
Commons



How Twitter
grew a thriving
group of
distributed
community

"Augmentation" vs "Automation"

[allow humans to be more human, and stop trying to make humans more like robots."](#)

augmentation may be about humans collaborating whereas automation is often not

code reformatters (fixing whitespace, etc)

AI Code Generation

automation often about replacing humans vs augmentation about empowering humans

automatic transmissions in cars

augmentation sometimes enabled by automation

Intellisense vs. Github Copilot

GPS navigation for drivers

automation - do more of the same thing, faster

computers collaborating with humans vs acting alone

Augmentation adds/expands information, automation doesn't.

automation - removes humans from the loop

n

Simple augmentation example page rank (and its successors) for scalable search

In a conference with Doug and Alan Kay, AK said 'kids will spend endless time learning complex games.' Motivation is what matters, not ease of use.

<http://tractionsoftware.com/traction/permalink/Blog9>

Alan Kay: Looking back I think that one of the paradoxes is that we made a complete mistake when we were doing the interface at PARC because we assumed that the kids would need an easy interface because we were going to try and teach them to program and stuff like that, but in fact they are the ones who are willing to put hours into getting really expert at things - shooting baskets, learning to hit baseballs, learning to ride bikes, and now on video games. I have a four-year old nephew who is really incredible and he could use NLS [Engelbart's 1968 hypertext system] fantastically if it were available He would be flying through that stuff because his whole thing is to become part of the system he's interacting with and so if I had had that perspective I would have designed a completely different interface for the kids, one in which how you became expert was much more apparent than what I did. So I'm sorry for what I did.

Things people don't really want to do need to be trivially easy!

Innovation -> commodity diffusion (a la Wardley maps)

"how can we lock customers into our system?"

if the technology is good and solid and long-lasting, customers don't buy as many (ex: Instant Pot)

sometimes the people writing checks are not the same as the people using the system (and getting the pros and cons of it)

separation between buyers and users

Economic Forces Shaping Technology

"the best tool for this problem is the one that I want to be able to list on my resume"

market and ideological forces allocating "jobs to be done"

A mystical "free market" doesn't incentivize discontinuous improvements in technology.

consumer use/tool vs professional use/tool

scalability (or lack thereof)

fixed vs human capital required to operate

frequency of changing jobs

improving only those things that already exist

the not-so-knowledgable hand of the market

Venture Capital forcing hockey-stick growth, vs. slow, sustained tool development / customer acquisition

Related: venture capital killing ideas which could have succeeded, given a longer term focus. Real disruption might need a longer time horizon?

Creating closed systems to protect the technology creator's ability to control who benefits from it, and how those benefits can be monetized and who receives the capital/profits/economic benefits the most.

TAM vs creating new markets

"who's intentions are being expressed through this automation/augmentation" Likely to be VCs, not end users in the long run.

Stopping/slowing what you're building and working through the way you want to build.

A3 process from Lean Manufacturing

similar to automation driving augmentation - does level b drive level c? eg improving product cycle time increases org learning rate, makes experimentation safer?

Einstein quote: "If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask, for once I know the proper question, I could solve the problem in less than five minutes." -- is this a level C type thinking?

The Three Economies - The Economy of Scale

Continuous Integration + automated testing
[a: writing code]
[b: writing tests]
[c: entire repo runs through automated tests before every deploy]

Examples of Level C Activities

When AO3 wanted to use a language that was easy for beginners to be productive with, they set up experiments for beginners to use specific languages and report on their experience

intentional practice communities eg - <https://leaddev.com/scaling-teams-hypergrowth/how-twitter-grew-single-team-thriving-distributed-community>

Make experimentation safe.

Concept of "divergence" phase from design thinking. Deliberately diverge first, then converge.

blameless post-mortem

In 1944 FDR asked Vannevar Bush how to transfer what the US learned about research in WWII to peaceful use. In 1945 Bush replied to Truman with a paper 'Science, The Endless Frontier' that led to creation of the NSF

from Doug keynote

1) Darpa -> internet

2) ISO 9000 -> industry cooperates on continuous

Code of Conduct

Our participation here reflects our mutual agreement and commitment to each other to follow this code of conduct during our discussion today. It applies equally to all of us (including facilitators).

- We share a commitment to providing a friendly, safe and welcoming meeting experience for all, regardless of level of experience, gender identity and expression, sexual orientation, disability, personal appearance, body size, race, ethnicity, age, religion, nationality, or other similar characteristic.
- Please be kind and courteous. Please avoid using terms that might detract from a friendly, safe and welcoming environment for all.
- Respect that people have differences of opinion and that our discussions will reflect different perspectives, trade-offs and impacts. There is seldom a right answer.
- Should anyone insult, demean or harass others in this setting, they will be excluded from interaction (contact the facilitators, if this happens). That is not welcome behavior.
- Likewise any spamming, trolling, flaming, baiting or other attention-stealing behavior is not welcome.

Note: We have adapted this code of conduct from the Ruby Code of Conduct.