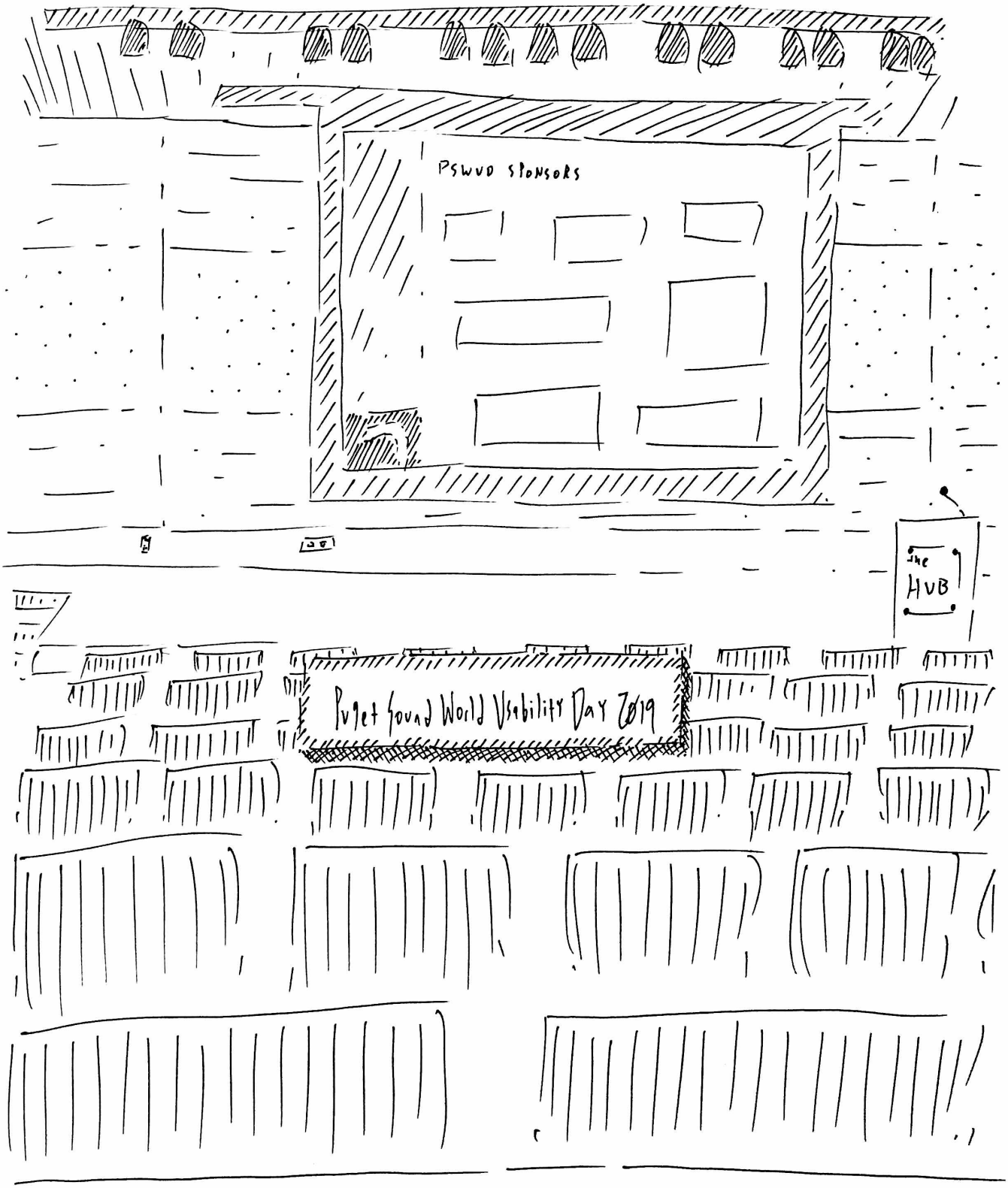
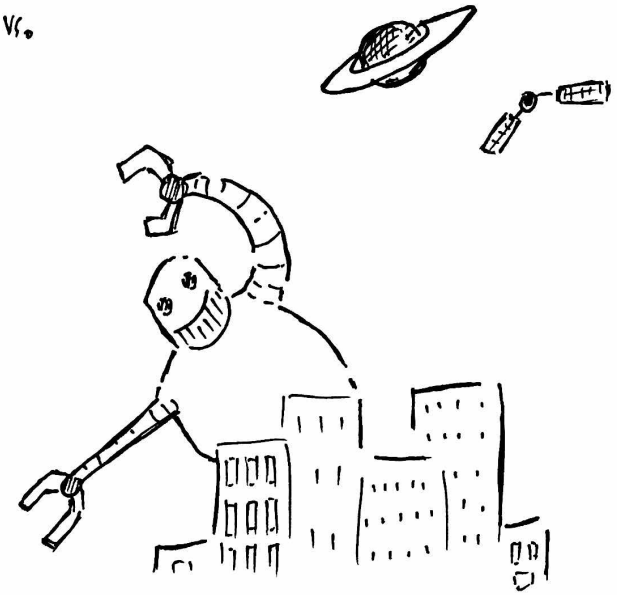


i attend a Conference

PSWUD

Kiri Blackwood, JPL/NASA - Human-Centered Design for a Robotic Future

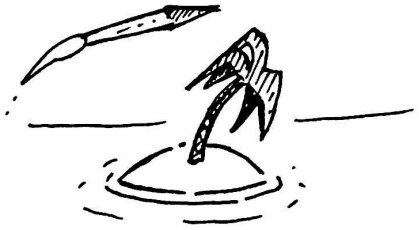
- Kiri thinks cultural wariness over automation & robotization is unnecessary (sic?) because "the future is already here":
  - Dishwashers didn't take our jobs.
  - Autopilot systems keep us safe.
- Kiri guarantees that robots will not replace us.
- The JPL & NASA builds robots.
- Robots are good at:
  - repetitive tasks
  - non-rewarding tasks
  - quick responses
  - precision
  - not panicking
- Robots are poor at:
  - adapting to unanticipated conditions
  - emergency conditions
  - knowing whether a response is 'appropriate' (cites Microsoft's 'Tay' incident)



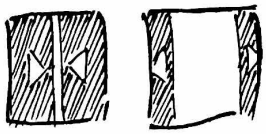
- "So we'll always need people!"
  - Because a GPS will drive us off cliffs, but humans won't.
- HOWEVER, we have a responsibility to design an ethical robotic future.
- We should design robots with chaos factors (like humans) in mind so our automated cars don't run over jaywalkers.
- Your bots need: situational awareness, shared awareness, vigilance, and robot-human transparency.
- Europa Jiller is built to orbit Europa & Jupiter via a complex pathway complicated by the powerful radiation of said objects
  - This lacked awareness between operator & robot traditionally, but this was resolved by using AI/ML to detect & alert operators in emergencies.
  - Transparency between why automated behaviors were performed calm & reassure operators, ensure vigilance.
  - Automated processes are to receive feedback 'in context' from operators.
- 'Successful automation requires two-way communication between robots and their human partners.'
- Deep Space Network: huge, expensive antennas around the globe sending & receiving data with space.
  - More automation resulted in operator atrophies; too many abilities protruded by automation = weakness when manual operation is necessary.
  - So: What can we tolerate atrophying?
  - NASA/JPL selectively shuts off automation intermittently in order to keep operators vigilant & skilled.
  - Operator displays are minimal when situation is nominal, expanded when non-nominal (emergencies) with colors & saturation used to highlight most pertinent output.
  - Operator remains in total control: one button lips control from automated processes and into operator's hands.

- In the airline industry, brief moments of automation cancellation keeps pilots 'fit.'
- JPL/NASA built a robot to identify landing places on Europa, land on Europa, take 'interesting pictures,' collect & analyze samples, and send 4BKb of data to NASA (which takes 90hr to receive). Entirely automated.
  - This results in much anxiety back at NASA due to lack of contact & situational awareness.
  - This anxiety is alleviated by what-if training & simulations performed on Earth. Hell, they trained it to identify tentacles to get the creative juices of engineers going.
  - The thing only yields results in 2028; by then, it'll be alien to NASA operators & engineers.
- Kris highly recommends reading... Missed that one.
- "The robotic future is inherently a design problem."
- Q&A: Incredulity to the safety of liver & jobs. Kris' response is to cite levels of 'design code review' necessary. "Automation will always destroy jobs, like refrigerators destroyed the ice industry." Believes that jobs will change, but we'll have to adapt and to help those who lose their jobs. It's our responsibility as 'a village.'

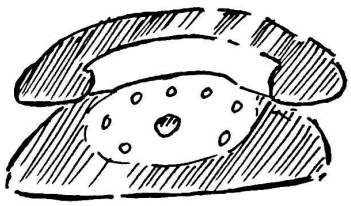
Ken Becker - Usability in 20/20



- Theme: What have we learned?
- 'Not all UI elements are awesome.'
- 'Iterative, user-centered design is a measured, proven way to make effective design.'
- 'Human behavior is hard to predict.'
- Sometimes the population's vocabulary doesn't square up with that of ours. 'Alternate vs. Mute,' etc.
- Cites the Hawaii missile crisis as a matter of bad UX/UI design lacking explicit messaging for emergency system operators.
- Another issue: lost messages on web forms.
- Advocates resurrecting 'user friendly' into common nomenclature.
- Shitty elevator buttons; still a thing.



- Rotating mouse: still bad design.
- Ken recommends setting usability goals:
  - identify task
  - identify user demographic
  - identify conditions
  - identify ideal completion rate

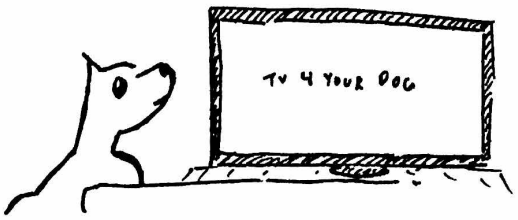


- Design for 'self-explanatory' rather than 'intuitive.' There is no 'intuitive'; only a base of experience that's personally developed.

Joe Dyer, Project 2022 - The Future of Design Teams

- "Millennials are taking over."
  - By 2020, 50% of the workforce will be Millennials.
  - They have different values; 71% want to work overseas. Over 50% want to work in a developing country.

- 75% of teams will have at least one remote worker by 2020.
- Gallup found that remote workers report greater enjoyment & satisfaction.
- We're seeing a shift towards design as a system; an assembly line.
- "The Blended Workforce Is Here":
  - Freelancers are being sourced from job boards (38%).
  - The top skill desired of freelancers is 'teamwork.' Apparently, they struggle with 'teamwork.'
  - Freelancers are willing to compromise pay for freedom & flexibility.



- Duke thinks we won't be as effected by AI & automation, as we stand on creativity & emotional intelligence.
- Where's the work?:
  - eCommerce
  - design for seniors (the boomers)
  - Video gaming (growing industry, surpassing film)
  - Pets; like Movies & shit, and other stuff

- There's a great industry forming around seniors of all sort. Also, bioscience & Kinesthesiology. Prosthetics.
- We're shifting to data-driven design rather than 'genius design.'
- Onboarding will look different. Only 39% of new hires know what their job entails these days, by the first day's end.

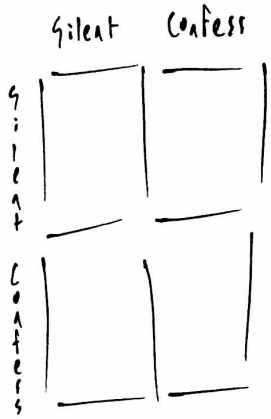
Vicki Haberman, Alaska Airlines - Designing Experiences That Connect Communities

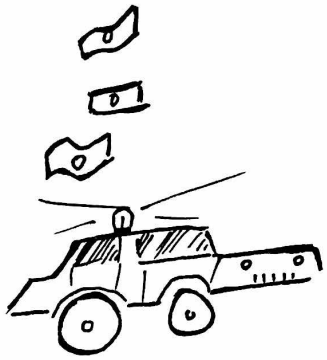
- Vicki grew up very privileged, but went to an incredibly diverse Magnet school where economic & social disparities was clear.
- She was heavily exposed to varied cultures via travel.
- She believes that Alaska Airlines believes their 'do the right thing' thing.
- She's observed loneliness pervasive to the contemporary day and impatient entitlement (two-day shipping).
- Designers must take responsibility for fomenting loneliness and instant gratification. So, how do we resolve this?
- Vicki doesn't have the answers, but wants to begin the conversation.
- Story: The Merger of Alaska & Virgin Airlines.
  - Virgin wanted to create an airline people loved. Alaska already did that in the PNW.

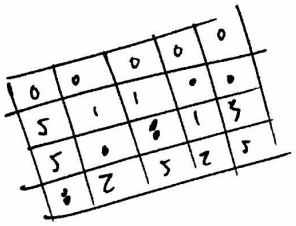
- Story: Vicki went to Marrakesh; it was legally authentic, culturally. Found that Alaska is all about connecting people to these experiences. Then, she went to Dubai, which is synthetic as any city could possibly be.
- Story: Alaska Airlines actually began in Alaska, where it was vital for running Milk & Passengers.
- Story: Alaska's Purchase of Virgin connected the company to the Californian Market, which is 4 times larger than that of the PNW.
- Story: Alaska allows autistic kids to enjoy 'trial flights' for their anxiety. They do this for service dogs too. They performed all sorts of ethnography to smooth the merger of two company cultures. They try to better represent Minority Pilots.
- This is shaping out to be a real advertisement.
- Challenge: Actively design experiences that connect communities.
- Now she wants us to have a conversation and engage in Q&A?

Jeffery Dernbach, T-Mobile - Game Theory for Promoting Strategic Human Interactions to Create Designs that Matter

- Prisoner's dilemma (sic):



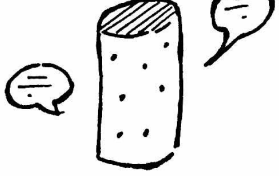




- Homie's talking too fast for Me to Properly document.
- Anyway, the question is: How do we design, using game theory, and defend these designs?
- We have to sell ethical design. Why is that?
- Jeff recommends We consider defending designs to stakeholders as a Massive Prisoner Dilemma Matrix. When You do this, We realize that it's a matter of reputation; that's the oil that'll grease the wheels and is the easiest to optimize.
- Basically, he used design theory and great, emotive illustrations to tell us that, by boosting our reputations, People will take us More seriously and adapt our designs.

Paul Cutsinger, Amazon - Who Put GUI in My VUI?

- Nowadays We compute (or can compute) via VUI. Amazon Wants that 'Star Trek' thing).
- Voice Design Patterns are fundamentally different from what We Visual Designers May assume.
- Skeuomorphism in VUI: 'Turn up the Volume.'
- We have to train Natural Language Processing With Many utterances (training data) and Map them to actions in VUI design.
- Use 'slots' as variables within VUI commands.
- You'll Want interaction to 'evolve;' intros should be abbreviated after users have already heard them. Users need variety because they can't 'skim' conversation.
- Just Make a Voice app called 'Chompers' to Make Kids brush Morning & Night With stories and quizzes. 'Incentivize,' rather.
- 'Be relatable.' Talk With them, rather than at them.
- Actual actors & voices restrict scalability and Variety, so Amazon has a ton of voices for txt2Speech.



- 'The Power of Voice is thought to action.' Skip the Means.
- Remember that users 'over-answer,' and that they always have the initiative.
- This is just a 'How-to' for building skills for VUI, Alexa.
- It's another Plug for a company, but this guy is Passionate about his craft and demonstrative.
- There's 7000+ Alexa devices out these and 7000+ skills. Scary shit!