Because everyone needs to be able to access and use the technology all around us

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Low Digital Affinity

Digital Affinity

≠ IQ

"There are people who are blazingly brighter than me – who can't use their technology... ...but I can"

Not Digital illiteracy either

Digital Literacy – is a skill

Digital Affinity - is a Talent

- Like singing
- Or athletics
- Or artists

Some are naturals Some are OK Some just can't do it at all



What comes naturally to us techies...

- Is **hard** for others –
- and out of reach for still others

And what about the last 5% (that's still 1 in 20)

- Low digital affinity more prevalent than expected
 - "I can use this one because I could yesterday"
 - "How do I find my resume"
 - Reverting to marker and red pen
 - "I am afraid I will break it"





An Open Source-Tool

for Windows and Mac



1. Makes computers simpler...

- Easier to find key features

- Easier and faster to use them

For Video demonstrating Morphic – Click here



3. Lets you create ultra-simple setups

 For those who can't use computers at all
 For those where computers are a barrier to their success For Video demonstrating Custom Morphic – Click here



Lets your AT follow you to any computer

Schools, libraries, companies with hoteling Rural, Reservations, low resource communities and, with COVID-19, homes with <1 computer/pers and prisons For Video demonstrating AT-on-Demand – Click here



Finally, I can use the computer at any library.

Before, only the computer in the resource room had AT. Morphic now put the AT onto

any computer I want to use.





Now, my AT follows me to each loaner I get.

Morphic instantly installs my AT and settings on each computer the college loans me.





For the first time, I was able to take the test with AT set up like mine.

Morphic captured my AT and settings and then made the secure test computer work the same as my own!





Lets a company (or Gov agency) set up their computer for you – in minutes.

- Interns, New employees

- Crashed Computers
- Testing and evaluations sites





Morphic saved my internship.

At my first internship, it took 3 weeks to get a computer set up with the AT I need. By then I was way behind my peers.

This time – with Morphic – it took 9 minutes. Done before I got back from the orientation talk.





Questions on Morphic and AT-on-Demand ?

https://morphic.org

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Rethinking Our Approach to Accessibility in the Era of Rapidly Emerging Technologies

Four ways that AI can help with accessibility

- 1. By making it easier to evaluate accessibility
- 2. By making it easier to create accessible materials from birth
- 3. By creating "auto-markup" and "auto-augment" browsers
- 4. By allowing us to approach accessibility in an entirely new way.

4. By allowing us to approach accessibility in an entirely new way.

WHAT IF WE COULD....

- Eliminate all mandates on authors/creators to make ICT accessible
 - Except 1 that required no knowledge of disability
- And instead created a means where each person could get a custom interface for each ICT they encountered that exactly matched their own unique needs and abilities.

WHY? What's wrong with what we are currently doing?

- Very expensive (small % of total product design but still cumulatively...)
- Very time consuming training and doing and checking and ...
- Assumes all designers know more about accessibility that most accessibility people do.

BUT MOST IMPORTANTLY

- It isn't working
 - Only a small percentage of products are accessible
 - Those that are, are only accessible to some often brighter PWD

What if

Change FROM (what we currently do/don't do)

- 1. All companies design all products to meet needs of all types, degrees, and combinations of disability
- 2. PLUS making products compatible with all assistive technologies (as a safety net for when we fail #1)
 - EXCEPT if the product has closed functionality in which case there is no safety net!
 - ALSO if there is no AT for some disabilities or some products there is no safety net again!
 - In these latter two cases they just have to make do in life without those ICT

What is proposed – for consideration

1. Create an "info-bot" like functionality – that can unde



and operate any ICT interface that a 50th percentile human can.

- It would use the same display (as pixels) and input devices as the human
- So nothing special required except that any half of the population for that product could use it.

and

2. Create Individual User Interface Generators (IUIGs)

that take the information from the 'info-bot' and create an interface for each specific individual's needs, abilities, and preferences.

- Not an interpretation of the standard interface (like most screen readers)
- But The interface the product would have if the mass market were just like them.



Potential advantages of such an approach

• FOR USERS

- Potential for essentially ALL products are accessible (~100%)
- Product Interfaces designed specifically for them as an individual (even if not optimal for others)
- Interface is always familiar
 - Different products have familiar interfaces (same mental model)
 - Same interface if same functionality
 - Interface doesn't change all the time on same product
- They control change
- Adaptive as abilities change over time or during a day
- Finally interfaces for all levels of cognitive and multiple disabilities
- No more "closed" products

Potential advantages of such an approach

• For Developers / Companies

- No need to train for all types, degrees & combinations
- No longer 100 or 200+ guidelines/ provisions
 - Just make sure Info-Bot can understand it
- Compliance is <u>much</u> easier build in what direct accessibility/usability you can – and 1 requirement
- Closing a product no longer creates a problem for accessibility requiring building in a lot of things.
- Simplified Design
- Higher compliance and much reduced litigation risks
- Wider market reach with a fraction of the effort

Potential advantages of such an approach

- Policy makers, Consumer advocates, experts, and society
 - Instead of focus on advocacy and lobbying industry

 can focus on figuring out the ideal interface for each type, degree &
 - combination of disability
 - Fewer much simpler regulations (for ICT)
 - Fewer lawsuits (almost none?)
 - Many more people able to use newer ICT including many who have no access today

Limitations and Potential Problems

- It will be hard to do (but easier than any other approach with similar potential?)
- It still won 't be 100 % (but better than 3-5%)
- Disruptive
 - Potential solution make accessibility outcome oriented. Must do old way til new way works – then you can rely on it.
- **Distributive Justice** (Same problem as AT today)
- Funding for the Info-Bot and for public IUIGs.
 - Industry can help especially with Info-Bot
- Will require a new contract between industry, consumers, and society

Implementation

- Funding agencies and Industry provide support for development of Info-Bot and IUIG like capabilities
 - Grand challenge
 - Info-Bot cloud based (though someday local)
- When AND ONLY WHEN Info-Bot and IUIGs are sufficiently developed and acceptable to people with disabilities

 industry can start relying on them for meeting access as long as Info-Bot can understand their products interfaces. As Info-Bot improves it can be relied upon more.
- The reliance on it can take place without revising guidelines if written as outcomes or if 'equivalent facilitation' allows alternate approaches to achieving accessibility.





Future of Interface

February 15-16, 2023

Brought to you by





Hosted by

Vint Cerf & Gregg Vanderheiden



A conference bringing together technology visionaries and creatives to explore what interfaces might look like in 20 years and how to make them accessible.



Future of Interface Accessibility



• <u>https://futureofinterface.org</u>

Thank you Questions ?

Other projects Raising the Floor is engaged in

- ITHACA project developing a civic participation platform that reduces potential AI-biases www.ithaca-project.eu/
- i-GAME project creating an inclusive game development space for cultural and creative industries' sector. igameproject.eu/

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A Sea-Change in Digital Equity for AT Users in Higher Education:

The Problem

Universities and colleges today make extensive use of computers in their education programs. They also feel that the ability of their students to use computers before they graduate is an important part of their education.

However, some students with disabilities (including physical, visual, cognitive, language, and learning disabilities) need assistive technologies in order to use campus computers effectively or at all.

The problem is that almost all of the computers that are available to students on campus that the students must use do not have any AT on them (nor do local library computers they may use for homework). This poses a challenge or even a barrier to the student's academic success if they cannot access the computers available to all of their peers.

This is particularly an issue for students from under-resourced communities who *must rely on* public or shareduse computers on campus or in their communities because they cannot afford a personal computer. Without the ability to use the computers BOTH on campus AND away from campus, at libraries, community centers, tutor programs, etc., – students are limited in their course options, as well as their ability to complete assignments, and exams, and even explore potential job opportunities.

Ultimately, it becomes impossible for these students to compete on an equal footing with their peers – a disparity that jeopardizes both their academic and long-term success.

AT-on-Demand

A breakthrough in digital access & equity for assistive technology users.

Until this year, installing all of the different assistive technologies required by different students – on even one computer – in every location on campus where students are required to use computers - was simply not possible or practical.

However, this has all changed with the release of the *free* utility Morphic with AT-on-Demand by Raising the Floor (a nonprofit based in Washington DC). Students can now have any AT they need (and they or the campus have a license for) automatically installed on any computer they need to use, in any location on campus or in the community – and have it configured just for them. When they are done using the computer, the AT disappears.

Benefits of AT-on-Demand:

- Allows any student who needs AT to use the same computers as their peers, on campus in the community, by allowing them to have their AT appear on any computer they need to use and disappear when they are done.
- Allows low-resource AT-using students who don't have their own computer to use any computer in their community to do homework, independent work, job searching, etc.
- Maintains all AT for colleges and universities saving time and money.
- Decreases the IT staff's need to manage different AT, thus reducing their workload.
- Privacy is ensured through oversight by an international Privacy and Data Ethics Council.
- Provides a level playing field with other students for those who need AT.

Morphic is currently installed on over 10,000 computers at major universities, libraries, job centers, and rehab programs. For more information, or to help contact <u>AT-on-Demand@raisingthefloor.org</u>.



MORPHIC MAKES COMPUTERS EASIER TO USE

Morphic, which is free open-source software, helps everyone find and use valuable features that simplify their computer experience.

Morphic's innovative approach to making computers easier and more accessible helps ensure that organizations can better serve people with disabilities, age-related limitations, or other barriers. Whether it's students, patrons, employees, clients, or constituents, Morphic can help organizations provide more equitable opportunities.

Who benefits from Morphic?

Leading universities, libraries, and workforce centers have deployed Morphic across their organizations in labs, classrooms, offices, and public spaces. Morphic is designed to help individuals easily find and use system settings in Windows and MacOS, through its MorphicBar. Assistive technology and other professionals rely on Morphic as an integral part of their AT resources and services.

MorphicBar's Basic Features include buttons for:

- Text Size
- Magnifier
- Snip
- Read Selected
- Contrast
- Color Filter
- Dark Mode
- Night Mode

How do organizations use Morphic?

"Morphic is a superb example of how to support an accessible and inclusive community that's appealing to everyone. U-M students, faculty, and staff have already benefited from it. Morphic has helped to alleviate migraines, make graphic design easier, and solved a problem with cross-platform usability."

Jane Berliss-Vincent, Assistive Tech Manager, University of Michigan

Morphic is available at no cost to any organization and we will work with your AT teams and IT support staff to help with Morphic deployment. Organizations can customize a MorphicBar by adding up to three buttons specific to their needs, providing easy one-click access to important programs, software, or websites such as email, learning management systems, portals and more.



About Morphic and Raising the Floor

Morphic draws on half a century of research and development at major research institutions, focusing on making computers and technology easier and more accessible for everyone.

Download Morphic for free at https://morphic.org/download/

For more information and to learn more, contact info@raisingthefloor.org