

Optimistic and Realistic Paths to Accessible Collaboration Tools



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Unrealized Potential

- Collaboration and Telecollaboration tool are reinventing the workplace and productive social interaction.
- Can be barriers or pathways to accessible collaboration.
- Electronically mediated interaction has far greater potential for accessibility than traditional interaction.
- A key problem is that collaboration tools are interaction group based (only as accessible as all the pieces) and the playing board is usually chosen by someone else.



Telecollaboration is invading:

- **Employment**
 - Local
 - Global partnerships
- **Education**
 - Webinars
 - Distance education
- **Social & Family Connections**
 - “My brother lives in Germany so we Skype once a week.”
- **Family gatherings**
 - Birthday parties
 - Weddings
 - Holidays

A banner image for a presentation on telecollaboration. It features a blue-toned city skyline with various skyscrapers and a prominent white archway. In the foreground, there is a large, glowing globe with a grid pattern. Two white birds are flying in the upper left corner. The word "Telecollaboration" is written in a bold, black, sans-serif font across the top of the image.

Telecollaboration

- **Many Barriers**
 - Visual only information
 - Auditory only information
 - Physically challenging controls
 - Complex presentations
 - Language issues
- **Solutions can pose new barriers**
 - Two channel problem
 - Spatially
 - Temporally
 - Adding complexity
 - Covering Information
 - Causing information to be missed



Telecollaboration Tools

- Solutions identified so far and being explored
 - **Captioning**
 - Repositionable Captioning
 - Caption Identification
 - RtF-CCC (Crowdsourced Caption Correction)
 - Low cost captioning
 - **Audio Description on Demand**
 - **Local Slide synchronization**
 - **Assistance on Demand**
 - Local
 - distant
 - **Time Warp**
 - **Touch and Read**

The header image features a blue-toned city skyline at night. A large, glowing globe is positioned on the left side, partially overlapping the city buildings. Two white doves are shown in flight, one above the other, on the left side of the globe. A white archway spans across the top right of the city skyline. The overall aesthetic is modern and technological.

Telecollaboration Tools 2

- Solutions identified - continued
 - **Touch and Explain**
 - **Preview / Screening tool**
 - **Expressive Language Repair**
 - **Simplified Interfaces**
 - **Braille Support**



Tool-Tray System

- OATTS Open Access Tool Tray System
 - **Modular**
 - **Open source and open platform**
 - **Supports free and commercial widgets**
 - Connected to free or commercial services
 - **Works with cooperating and non-cooperating telecollaboration software**



Accessible Collaborative Development Tools



Accessible Collaborative Development Tools

- Too expensive to keep creating access from scratch
- Need an infrastructure that can:
 1. **Make it easier to discover solutions for an individual**
 2. **Make it possible to apply the solutions anywhere on any device or software**
 3. **Make it faster, easier, and much less expensive to create solutions**



What if

**anytime someone approached a device,
that device would automatically change
into a form that people could understand, and use?**



Video at <http://tinyurl.com/gpiivideo>

Imagine if you could pick up any device,



The transformation doesn't have to just be something simple like larger fonts or captions

It could be an entirely transformed interface to fit the needs and abilities of a user.



Imagine

An elder, who has trouble with memory and technology

**-- but wants to communicate
with their grandchildren**

Gmail - All Mail - greggv2@gmail.com - Windows Internet Explorer

https://mail.google.com/mail/?ui= gmail.google.com

Google gmail.google.com

Favorites Suggested Sites eBay Sony eBook Library SonyStyle Web Slice Gallery

Gmail - All Mail - greggv2@gmail.com

Gmail Calendar Documents Web Reader more greggv2@gmail.com | **New! Priority Inbox** Beta | Settings

Gmail by Google

Search Mail Search the Web Show settings Create account

Mail

NYT Travel - [Itineraries: Hotel Chains Try Training With Improv and iPods](#) - 20 hours ago

Archive Report spam Delete Move to Inbox Labels More actions

Compose mail

<input type="checkbox"/>	me	water in holes - pump
<input type="checkbox"/>	me	Please see me about our mail lists
<input type="checkbox"/>	me	rebecca. see me about this when you get I
<input type="checkbox"/>	me	Time to talk?
<input type="checkbox"/>	me	How is the Salvendy chapter update comir
<input type="checkbox"/>	me	(no subject)

Done Internet | Protected Mode: On 120%

Recycle Bin

Skype™ [2] - greggvand

Skype Contacts Conversation

Gregg Vanderheiden

Add video or write a message to friends

\$ 7.38 Skype Credit

New Search Contacts, Groups

Contacts Conversations

- Aaron Leventhal Taking a small break
- Gerard F. Corbett
- Gunela Astbrink
- Larry L. Lewis, Jr.
- Michael Cooper
- Rebecca Perkins
- Rich Schwedtfeger Back at work
- Sofia Celic-Li
- WJR Consulting Inc.
- Alain MOBILE
- Alain Office 386 399 conf rm
- Andy Kaiser

14,079,126 people online

New notifications

Call phones

Directory

picasa photo viewer

Share

GreggV2@gmail.com | My Account | Sign out

Help

Recommendations

- Manage your photos
- Importing your photos
- Getting started
- Albums
- Using Picasa

Hide

Find more easily with Google

Comment Print

Picasa 3.6 New Features Picasa 3.6 has improved name tags, a feature based on the same



The Big Three

WHAT IF...

- 1. Everyone could easily find out what would help them**
- 2. Any device that a person encountered would instantly change into a version they could use and understand....**
- 3. It cost developer/vendors much less to develop, market , and support new solutions – internationally –and even consumers and clinicians/teachers/family could participate in the process**

Major Components of GPII

**Will something
help me?
What?**

**Getting access
automatically,
anywhere, on
any device**

**Tools to make it
easier, lower-cost
to create & market
new solutions**

Major Components of GPII

**Will something help me?
What?**

User Awareness
Users find out something exists for them.

Needs & Prefs Discovery Aid
Users can find out which types of things help them

Needs & Prefs Storage
Users can store needs & preferences info for later use

GPII Unified Listing & Marketplace
Find all solutions, AT & Mainstream Device / feature / Service

Shopping Aid
Users can use their profile to find just what helps them

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Developers' Space
Free & commercial parts to speed dev, and lower costs

Consumers & Experts Connection
Experts, consumers, testers etc to help new developers

Service Creation Tools
To make it easy to Create AOD, Media, & Material service

GPII Unified Listing & Marketplace
Developers can quickly, efficiently market worldwide

Micro-Finance Micro-Payment Infrastructure
Mechanism for Financing R&D and Service Del

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Getting access automatically, anywhere, on any device

Prefs & Perm Server
User needs & prefs stored securely and available anywhere

Real Time Matching
Prefs and context used to determine best fit; here, now.

Delivery/Launch Management
Built-in + AT are auto-adjusted and launched, anywhere

Media & Materials
Auto- augmentation transformation and/or replacement

Assistance on Demand (AOD)
User can call up any assistance anywhere

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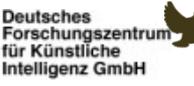
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So how is it going?



- **Over 75 members in the Raising the Floor Consortium**
 - **Industry**
 - **Universities**
 - **Organizations**
 - **Consumer Groups**
 - **NGOs**
- **International organization; HQ in Geneva**
 - RtF-Int' l RtF US and RtF Canada





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 - Industry
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 - NGOs
- International organization; HQ in Geneva
 - RtF-Int' l RtF US and RtF Canada
- **A number of major grants in US, Canada, and Europe**

Major Components of GPII

Cloud4all

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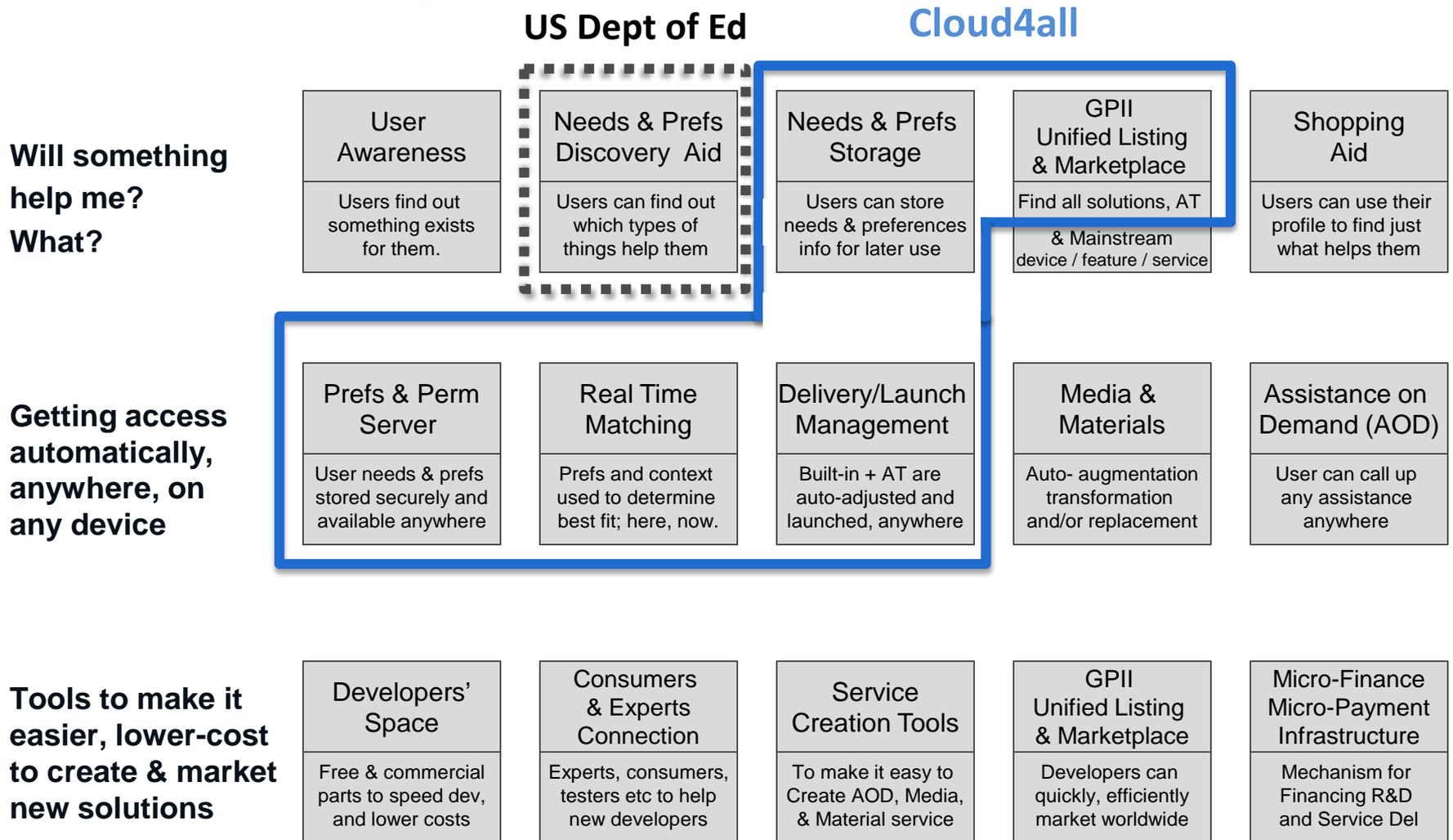
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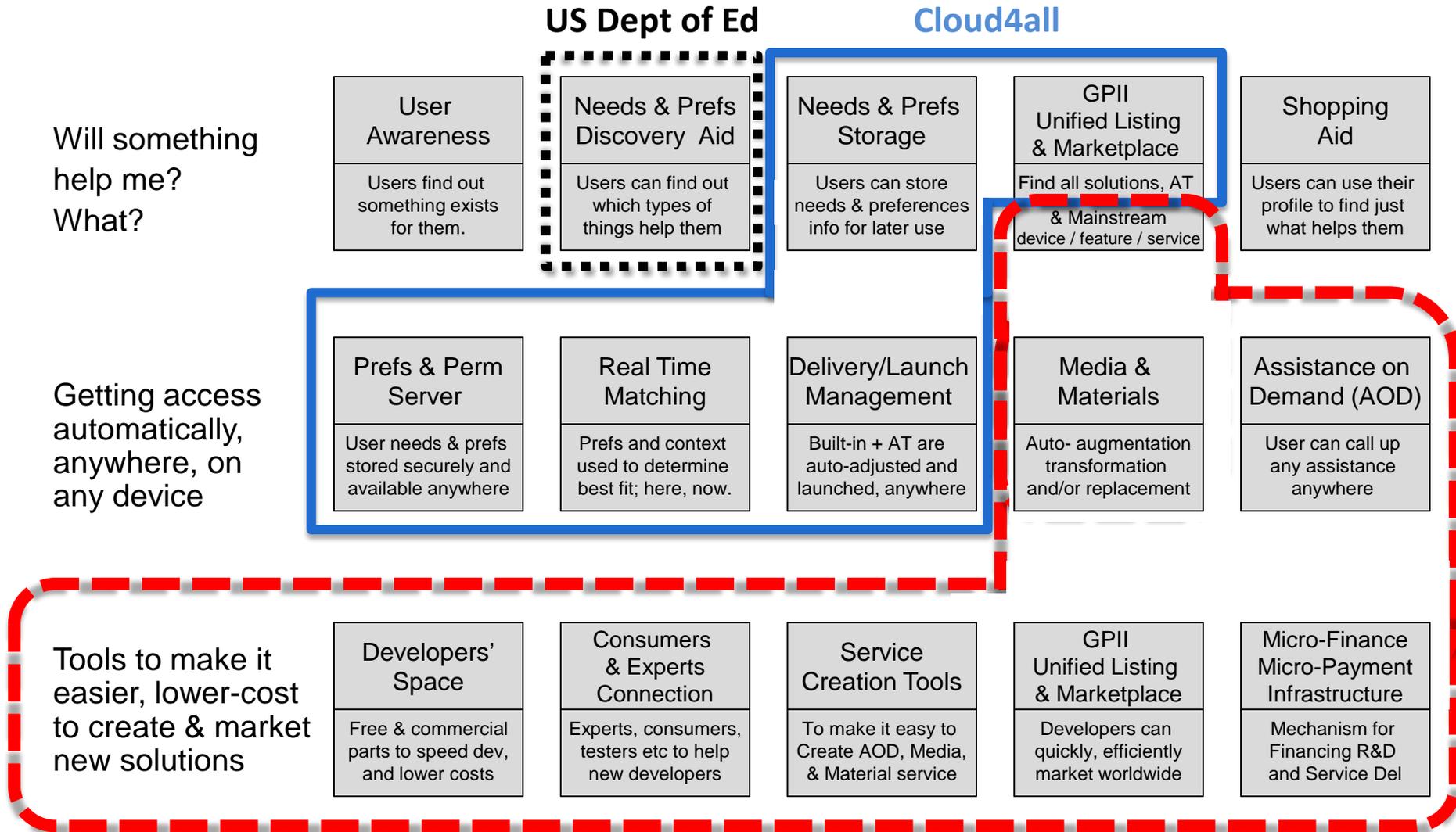
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Key to the last part is Collaborative Development

- **Build on rather than duplicate**
 - Ability to build on past work of others
 - Ability to use common core components and only have to add innovation part
- **Greater involvement – more players**
 - Contribute to accessibility while practicing in a scientific area
 - Modular design
 - Other parts from other specialties
 - Students get farther because start further down the track
 - Tools to allow “novice” programmers who are disability experts to invent (clinicians, teachers, users)
- **Clear and Easy Path to Transfer**
 - Easy tools for internationalization
 - Ready path and mechanism to market internationally

The image shows a blue-themed header with a stylized globe on the left containing the text 'GPII'. To the right of the globe is a city skyline with various buildings and a large white archway. Two white birds are flying in the sky above the globe.

GPII

- **Potential of GPII**

- **Through international collaborative work**
- **and an enabling Infrastructure**
- **we can create solutions that**
 - are simpler, instant, to use
 - work anywhere on any device, media, and materials
 - cost less per person/solution
 - result in more access built into Mainstream ICT
 - makes it possible for AT vendors to thrive
 - while serving the tails (and the tails of the tails)
 - introduce access as a service (device and human)
 - allow many more to develop; from scientists to users (and SUs)



RESEARCH QUESTIONS

- **Thousands of questions**
 - Interaction Studies (Tech alone not solution)
 - Effects of delays and different forms of interaction
 - Better transformations (more automatic, <\$, <time)
 - Better ways to be able to add audio description to real-time presentations.'
 - Unmet needs beyond the identified tools.
 - Mechanisms for handling whiteboard interactions
 - The Info-Bot
- **Development projects**
 - Commercially hardened implementations of all of the identified tele-collaboration concepts.
 - Self adapting interfaces (based on user needs and preference sets)
 - IUIGenerators

Thank You



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