Cognitive and Learning Disabilities Accessibility (COGA) Task Force

Making Content Usable

TPAC 2021

Before we begin...

May we record?

Agenda: TPAC21 COGA Panel

- Introduction: what is COGA?

- Overview of the objectives of COGA patterns and user stories

- Conversation with panelists about one or two objectives

- Discussion: your questions for the panelists

- What next?

How to submit your questions

Add them to the session IRC channel

Add them to the Zoom chat

Raise your hand in Zoom

We will be monitoring the questions that come in through IRC and Zoom chat so that they can be asked at the appropriate time.

Introducing our panelists

Lisa Seeman

COGA Task Force Co-facilitator
Co-founder, Athena ICT

John Kirkwood

COGA Task Force Member
President, CityMouse

David Fazio

COGA Task Force Member
President, Helix Opportunity

Moderator: Rain Michaels

COGA Task Force Co-facilitator
Interaction Designer, Google

Cognitive is the **largest disability category**

- **12% of the U.S. population** are estimated to have cognitive disabilities ([CDC, 2019](#))

- **1 in 6 people in the world** will be over the age of 65 by 2050 ([UN, 2020](#))

- **10-20% of people** show signs of dyslexia ([Yale, 2021](#))

- **~ 1% of the world** is autistic ([WHO, 2021](#))

930million* people worldwide

* Plus many people who are undiagnosed or have not reported

Cognitive accessibility is **imperative**

Individuals with cognitive disabilities are often left out of accessibility considerations.

Yet, digital experiences are ubiquitous and becoming **increasingly essential for self care, safety and independence**.

Functional needs must be addressed

Functional needs	Related conditions
🎯 Attention	Attention Deficit (Hyperactivity) Disorder (ADD/ADHD)
📖 Language and literacy	Aphasia, Dyslexia
📚 Learning	ADHD, Brain Injury, Dyscalculia
🧠 Memory	Mild Cognitive Impairment, Brain Injury
🧭 Executive function	Brain Injury, Autism, Aging
❤️ Mental Health	Anxiety, Post Traumatic Stress Disorder

Cognitive needs can be **situational or temporary**

😴 Fatigue

😟 Stress

❓ Distraction

🌍 Using unfamiliar languages or measurements

➕ And many more...

What is COGA

🏷️ Full name

Cognitive and Learning Disabilities Accessibility Task Force

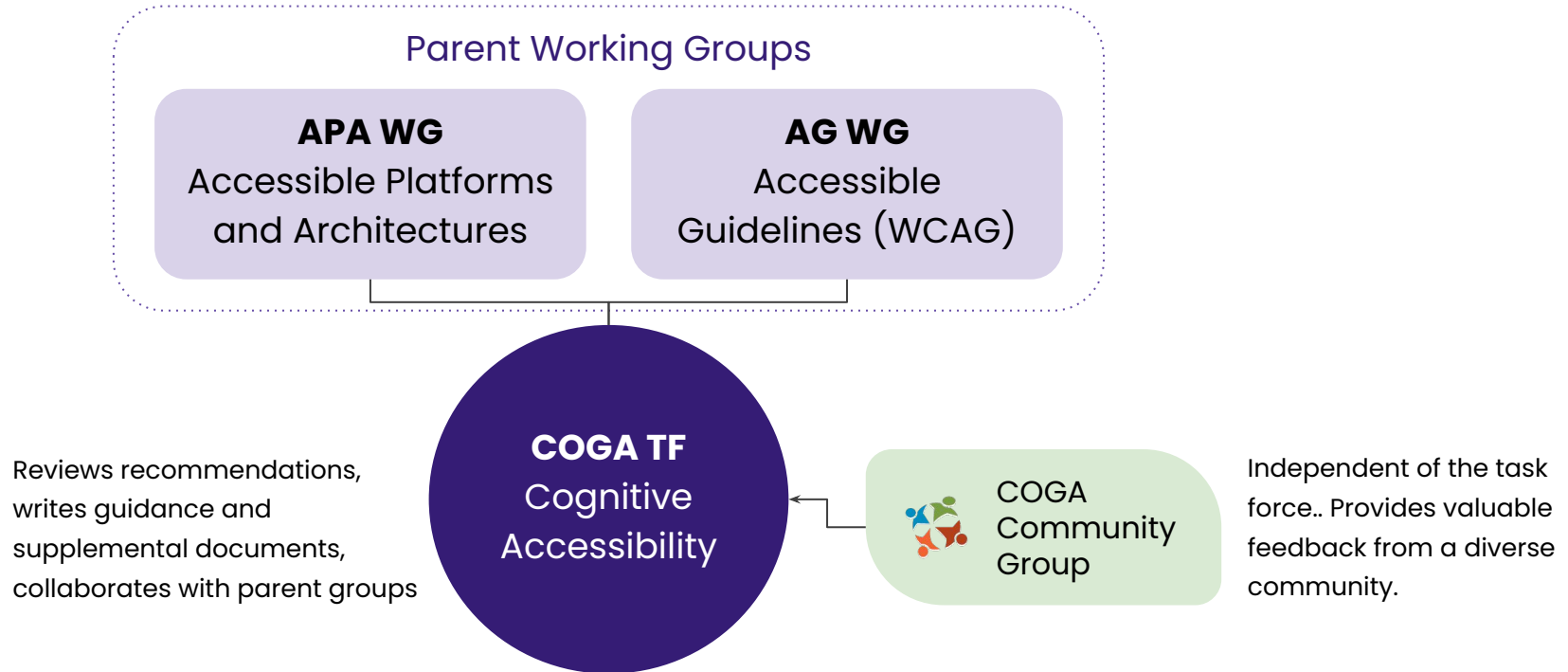Nickname is short for **Cog**nitive **A**ccessibility

🎯 Goal

Improve web accessibility and usability for people with cognitive and learning disabilities and differences

💪 Challenges

Many complex and varied types of disabilities

Common myths and biases

How COGA fits into the **W3C landscape**

Link: COGA Task Force

Parent Working Groups

APA WG
Accessible Platforms and Architectures

AG WG
Accessible Guidelines (WCAG)

COGA TF
Cognitive Accessibility

Reviews recommendations, writes guidance and supplemental documents, collaborates with parent groups

COGA Community Group

Independent of the task force.. Provides valuable feedback from a diverse community.

What COGA is doing

✅ Accomplished

Published version 1.0 of Making Content Usable for People with Cognitive and Learning Disabilities in April, 2021

📋 Working on

Collaborating on WCAG3 specifications

- Clear Language
- Access to Help

Mental Health & COGA literature review

🧭 Future plans

Release version 2.0 of Content Usable, which will include:

- Mental health user needs and patterns
- More emphasis on internationalization

"**Making content usable**" removes cognitive barriers

COGA published guidance in April 2021 (**w3.org/TR/coga-usable**) that includes:

Objectives: Goals that specifications should have in order to support cognitive needs

📚 **User stories:** Narratives that explain complex barriers

🎨 **Design guide:** Design and engineering patterns that can inform specifications

🤔 **User testing:** How to test with users who have cognitive and learning disabilities

👥 **Personas:** Representations of users with common cognitive and learning disabilities

Objectives of the user needs and design patterns

Help users understand what things are and how to use them

Help users find what they need

Use clear and understandable content

Help users avoid mistakes and know how to correct them

Help users focus

Ensure processes do not rely on memory

Provide help and support

Support adaptation and personalization

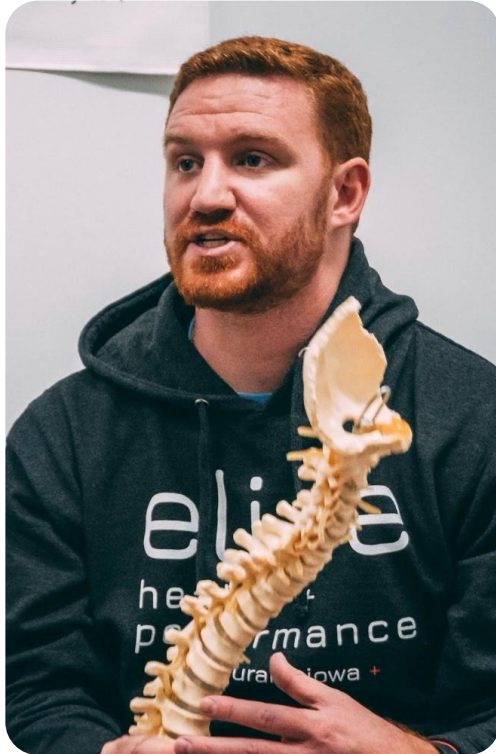# **Persona:** Jonathan, a therapist with dyscalculia

❗ "The schedule says there is a meeting at 15:30 UTC. Now is lunch time. Did I miss it?"

✔️ "There is a line marker showing the current time (now), so I can see the meeting is soon."

Examples of other ways to support Jonathan

- Provide alternative ways to represent numerical concepts

- Provide a login that is simple, single step, and does not rely on memory or transcription

Persona: Alison, a retiree with mild cognitive impairment

❗ "I'm not sure what I should press. I pressed something that looked like the 'buy' button but it did nothing. Is this site broken, or is it me?"

✔️ "I could easily tell that the "buy" button was a button, andI have now bought tickets for a vacation."

Examples of other ways to support Alison

- Use a familiar hierarchy and design

- Clearly identify controls and how controls are used

- Make it easy to find help, including human help

Persona: Kwame, a researcher who had a brain injury

! "I got lost making a shopping order and hit the back button on the browser. It reloaded the home page. I had to start all over again."

✓ "There is a clear back button on each step and when I use the browser back button it also works."

Examples of other ways to support Kwame

- Use an clear page structure without too much content

- Help the user avoid and correct mistakes

- Help the user prepare for a task

Resources

From the COGA TF

- [Making Content Usable for People with Cognitive and Learning Disabilities](#)

- [Join the COGA Task Force](#)

From W3C members

- [Why commit? - John Kirkwood, TEDx](#)

- [W3C-WAI + Cognitive Accessibility - Steve Lee](#)

Resources from other organizations

- [Alzheimer's Association: Facts and Figures Report](#)

- [CDC: Disability and Health Data System Explore by Location](#)

- [Report to Congress: Traumatic Brain Injury in the United States](#)

- [US Senate: Service and Support Needs of Adults Aging with Intellectual/Developmental Disabilities](#)

- [WHO: Autism spectrum disorders](#)

- [WHO: Dementia](#)

- [Yale: What is Dyslexia?](#)

What you can do for cognitive accessibility:

Work with COGA when writing documents, recommendations and specifications
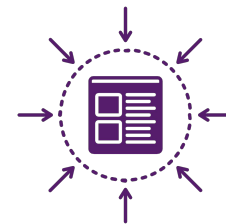
- Add some of our user stories, needs, and personas into your specifications

- Ask us for user needs specific to your work

- Ask us to review your work

What you can do for cognitive accessibility:

Raise awareness and get involved

- Tell your teams about the COGA Task Force and COGA users!

- Let us know about personas and user needs we may have missed

- Give us feedback on [Content Usable](#)

- Join the COGA [task force](#) or [community group](#)

Thank you for attending!

COGA: Making Content Usable

TPAC 2021

✉️ **How to reach COGA**

Lisa Seeman

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Rain Breaw Michaels

rainb@google.com

Appendix

Agenda

- [[[Customize for the meeting!]]]

For our reference while we work: Objectives

1. Help Users Understand What Things are and How to Use Them

2. Help Users Find What They Need

3. Use Clear and Understandable Content

4. Help Users Avoid Mistakes and Know How to Correct Them

5. Help Users Focus

6. Ensure Processes Do Not Rely on Memory

7. Provide Help and Support

8. Support Adaptation and Personalization

Steve's slides (HTML)
https://www.w3.org/Talks/2021/0908-techexeter-coga11y/index.html#coga

Rachael's slides

Objectives

- Humanize and diversify "cognitive and learning disabilities"

- Introduce design patterns that support people with cognitive and learning disabilities

- Provide ways to learn more about this topic

Agenda

- Background

- Personas and Design Patterns

- Plain Language

- Questions

Functional Needs: Cognitive & Learning Disabilities

Functional Need (Use with Limited…)	Example Disabilities with these Needs
Attention	Attention Deficit (Hyperactivity) Disorder
Language and Literacy	Aphasia, Dyscalculia
Learning	Brain Injury, Dyslexia
Memory	Age Related Forgetfulness, Mild Cognitive Impairment
Executive	Brain Injury, Autism
Mental Health	Anxiety, Post Traumatic Stress Disorder

Link: <u>DRAFT Functional Needs</u>

Related Situational or Temporary Disabilities

- Fatigue

- Stress

- Distraction

- Using foreign languages or measurements

Making Content Usable

Objectives
1. Help Users Understand What Things are and How to Use Them
2. Help Users Find What They Need
3. Use Clear and Understandable Content
4. Help Users Avoid Mistakes and Know How to Correct Them
5. Help Users Focus
6. Ensure Processes Do Not Rely on Memory
7. Provide Help and Support
8. Support Adaptation and Personalization

Link: Making Content Usable for People with Cognitive & Learning Disabilities

Alison: Aging User with Mild Cognitive Impairment

Problem: I'm not sure what I should press. I pressed something that looked like the "buy" button but it did nothing. I am not sure if it is me or if this web site just doesn't work.

Works well: The "buy" button was clearly something I could click. The process was easy. I have now bought matching dresses for all the grandchildren.

Sample User Needs
- Use a familiar hierarchy and design
- Use a consistent visual design
- Clearly identify controls and their use
- Make the relationship clear between controls and the content they affect
- Provide human help
- Make it easy to find help and give feedback

Make the relationship clear between controls and the content they affect

The relationship between controls and affected content should be completely clear and unambiguous.

- This can be achieved through:
  - visually grouping controls with the content they relate to,
  - including controls within the region they affect,
  - using clear dividers or white space between regions in a page that may have separate controls or a scroll bar,
  - avoiding multiple or nested scrolling area

Waterford Fair

Home

2021 Demonstrating Artisans

2021 Tour of Village Gardens

Fine Art

Entertainment 2021

Food & Libations

Contact | Map

News

Sponsors

Download the Eventeny App for FREE and have the entire Fair schedule at your fingertips!

Google Play   ev

2021 BEST OF LOUDOUN WINNER

Save the date for the 2021 Waterford Fair! October 1 — 3

2021 Waterford Fair

October 1 – 3

Entertainment Schedule

Scroll down for the full three-day schedule!

eventeny

Sign in

Create events your way.

From live to virtual events, streamline workflows, applications, marketplace, maps, tickets, schedules, videos and so much more. Organize your artists, vendors, sponsors, exhibitors and volunteers the way you want.

I am a/an:

Event organizer

Artist, exhibitor, or vendor

Volunteer

Sponsor

Tickets

Tickets range from $12 – $45; kids (12 and under) are FREE. Scroll down for all ticket offerings.

eventeny

Sign in

exhibitors and volunteers the way you want.

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Volunteer

Sponsor

Already using Eventeny? Sign in here.

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Waterford Fair

Home

2021 Demonstrating Artisans

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Contact | Map

News

Sponsors

Download the Eventeny App for FREE and have the entire Fair schedule at your fingertips!

Google Play ev

2021 BEST OF LOUDOUN WINNER

Save the date for the 2021 Waterford Fair! October 1 — 3

Bringing a group of 20+?

Best of Loudoun

October 1 – 3

Entertainment Schedule

Scroll down for the full three-day schedule!

eventeny   Sign in   ✕

Why Eventeny

Artists, vendors, & exhibitors management

Volunteer management

Sponsor management

Virtual events

Interactive maps

Eventeny App

Tickets

Tickets range from $12 – $45; kids (12 and under) are FREE. Scroll down for all ticket offerings.

eventeny

Welcome

Email Address

Password

Forgot password?

Sign in

or sign in with

G Google

LinkedIn

Facebook

Don't have an account?
Sign up for free

Amy: Autistic Computer Scientist

Problem: Sometimes people use lots of words on web site links that do not seem to make sense. I think they are metaphors, but I'm not sure.

Works well: I put my mouse over items I do not understand and there is some clear text that explains what it did. I would rather they use clear text in the first place then at least I can use it.

Sample User Needs:
- Separate each instruction
- Use white spacing
- Ensure foreground content is not obscured by background
- Use Literal Language
- Explain Implied Content

Explain Implied Content

Provide definitions or explanations for implied or ambiguous information such:

- body gestures,

- emotions,

- jokes,

- sarcasm,

- metaphors and simile, and

- facial expressions

Everyone feels like they are working hard but not making progress.

A Challenge

Take 1 day and pay close attention to how much implied content you use and interact with – you will be surprised!

Problem: I find it hard to understand and remember long and complex written instructions.

Works well: The instructions for scanning items are presented as a clear list of steps with pictures and easy to understand language next to them. If I get stuck I can quickly find a reminder of what to do with such 'Easy to Understand' content.

Sample User Needs:
- Use icons that help the user
- Support a personalized and familiar interface
- Provide alternative content for complex information and tasks
- Enable APIs and extensions

Support a Personalized and Familiar Interface

Provide users with a way to personalize their interface to make it familiar. This can be done by:

- Allowing user preferences on presentation such as font style, font size, line heights, margins, and contrast.

- Allowing a rollback to a previous interface that the user is familiar with and knows how to use.

- Adding semantics on controls, links, and symbols that allow the user to control the experience.

- Ensure the user knows the personalization options and can easily configure them. Clear instructions can help.

Gopal: Retired Lawyer with Dementia

Problem: I want to turn the volume up but there is no dial?

Works well: There is a clear volume button with a label that makes sense, so I know what to press.

Sample User Needs:
- Design forms to prevent mistakes
- Use clear visible labels
- Accept different input formats
- Avoid data loss and "timeouts"
- Notify users of fees and charges at the start of a task
- Help the user stay safe
- Use familiar metrics and units
- Provide information so a user can complete and prepare for a task
- Clearly state the results and disadvantages of actions, options, and selections

Notify users of fees and charges at the start of task

- Tell the user about all charges at the start of a transaction including typical values.
- Any conditions and terms should also be available at the start of the transaction in easy language.

Step 3: Obtain a Business License

Businesses based in the county outside the incorporated towns of Hamilton, Hillsboro, Leesburg, Lovettsville, Middleburg, Purcellville, and Round Hill are required to obtain a local Business Professional Occupational License from the Loudoun County Commissioner of the Revenue. If in an incorporated town, contact that town for licensing requirements.

There is a $30 maximum first-year fee. Business licensing is a form of local taxation of gross receipts generated from business activity. Renewal license fees are based on these receipts. The business license tax rates vary from 5 cents per $100 of gross purchases for wholesale sales up to a maximum of 50 cents per $100 of gross receipts for public service corporations.

Clearly state the results and disadvantages of actions, options, and selections

When presenting users with actions and selections, clearly explain the benefits, risks and consequences of each option. This includes any:

- changes from what the user asked for,

- disadvantages from the standard product or offering,

- features that may be a risk to users wellbeing or finances.

Examples from Alaska Airlines
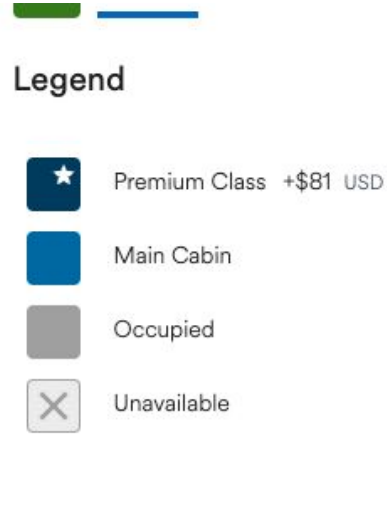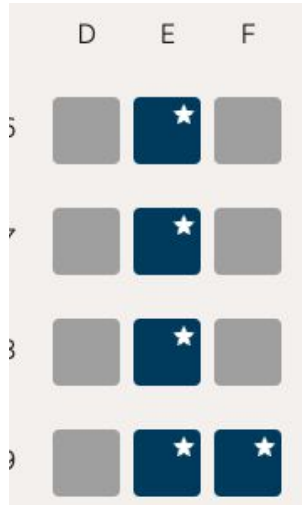
Example from Giant Food Delivery

Coronavirus Safety Update ✕

As a safety precaution to avoid physical contact during pickup, we will no longer require signatures. We will check your ID through your vehicle window for age-restricted items, including alcohol.

Pickup from 🛍 **Giant** PICKUP

Dairy

$3.00 ~~$3.29~~
Kraft Mexican Style Four Cheese Made with 2% Milk Shredded
7 oz bag | $6.82 / lb

| − | 1 | + |

∨ Substitution Options

✅ **$1.99 each**

$3.00 ~~$3.29~~
Kraft Sharp Cheddar Reduced Fat Cheese Made with 2% Milk...
7 oz bag | $6.82 / lb

| − | 1 | + |

∧ Substitution Options

✅ **$1.99 each**

✓ **If unavailable, substitute this item**

Pickup from 61 Catoctin Circle N...

Pickup Subtotal	$3.98
Fees ∨	$2.95
Estimated Tax	$0.15

| View Savings | **Estimated Savings: $2.60** |

Estimated Total: $7.08*

*Estimated totals are subject to change due to actual weights and availability. If your order includes substituted items, you pay for the item with lower price.

Checkout

Promo Code

| | Apply |

Jonathan: Therapist with Dyscalculia

Problem: It says there is a meeting at 15.34 UTH. Now is lunch time. Did I miss it?

Works well: There is a line marker showing what time of day it is now, so I can see the meeting is soon.

Sample User Needs:
- Provide alternatives for numerical concepts
- Provide a login that does not rely on memory or other cognitive skills
- Allow the user a simple, single step, login
- Provide a login alternative with less words

Provide alternatives for numbers / numerical concepts

● Provide a description or representation for numerical content such as:

- size
- quantity
- distance
- Time
- date

- temperature
- positive/negative
- calculations
- sequencing
- percentages

How warm or cold is 272 Kelvin?

272 K	283 K	294 K	305 K

Kwame: A Traumatic Brain Injury Survivor

Problem: I got lost making a shopping order and I wanted to go back to the previous step. I hit the back button on the browser navigation bar and it reloaded the home page. I had to start all over again.

Works well: There is a clear back button on each step and when I use the browser back button it also works.

Sample User Needs:
- Provide Search
- Make the site hierarchy easy to understand and navigate
- Use a clear and understandable page structure
- Help the user stay safe
- Avoid too much content
- Provide information so a user can complete and prepare for a task
- Make short critical paths
- Make the purpose of your page clear

Provide information so a user can complete and prepare for a task

Before a user performs a task consisting of multiple steps, ensure they have an estimate of the amount of effort required to complete the task:

- the time it might take,

- details of any resources needed to perform the task, and

- overview of the process and next step.

- Once the user starts the task, ensure the user clearly understands when the task is still "in-process" and when it has been completed.

-

Example: EIN Application

Hours of Operation

Monday to Friday, 7 a.m. to 10 p.m. Eastern Standard Time.

Step 1: Determine Your Eligibility

- You may apply for an EIN online if your principal business is located in the United States or U.S. Territories.
- The person applying online must have a valid Taxpayer Identification Number (SSN, ITIN, EIN).
- You are limited to one EIN per responsible party per day.
  - The "responsible party" is the person who ultimately owns or controls the entity or who exercises ultimate effective control over the entity. Unless the applicant is a government entity, the responsible party must be an individual (i.e., a natural person), not an entity.

Step 2: Understand the Online Application

- You must complete this application in one session, as you will not be able to save and return at a later time.
- Your session will expire after 15 minutes of inactivity, and you will need to start over.

Step 3: Submit Your Application

- After all validations are done you will get your EIN immediately upon completion. You can then download, save, and print your EIN confirmation notice.

Apply Online Now

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Maria: A User who has Memory Loss

Problem: When there are lots of buttons or menu items I often make mistakes and press the wrong ones and end up getting frustrated and wasting time.

Works well: I like web sites that allow me to work through a series of instructions and edit boxes one after the other with clear buttons moving me to the next stage.

Sample Design Patterns:
- Make the purpose of your page clear
- Make it easy to find the most important tasks and features of the site
- Make each step clear
- Use icons that help the user
- Let users go back
- Make it easy to undo form errors
- Do not rely on users calculations or memorizing information

Make it easy to find the most important actions and information on the page

- Make key content visually stand out. Key content should be visible to users without needing to scroll the page or hover over content. This includes:

  - critical tasks and the controls needed to complete them,

  - interactions for critical features (e.g. login forms, send buttons), and

  - important information (e.g. health warnings or information that can affect safety).

IRS

File   Pay   Refunds   Credits & Deductions   Forms & Instructions

Search

Get My Payment

Get Your Refund Status

Get Coronavirus Tax Relief

Get Details on the Advance Child Tax Credit

File Your Taxes for Free

Get Your Tax Record

View Your Account

Make a Payment

Forms and Instructions

1040 and Schedules 1-3
Individual Tax Return

Other 1040 Schedules
Information About the Other Schedules Filed With Form 1040

Form W-4
Employee's Withholding Certificate

55

Form W-9
Request for Taxpayer Identification Number and Certification

Sam: Librarian who has a Hemiplegia and Aphasia

Problem: Long sentences are hard, too many strange words, and I get lost.

Works well: I like simple short sentences with easy words.

Select Design Patterns:
- Use clear words
- Use a simple tense and voice
- Avoid double negatives or nested clauses
- Use literal language
- Keep text succinct
- Use clear, unambiguous text formatting and punctuation
- Explain implied content
- Provide help for forms and non-standard controls
- Separate each instruction

Make Each Step Clear

In instructions, separate each step. State each step clearly. This includes:

- including all steps, even those you think are "obvious",

- using numbers and lists can also help,

- providing complex instructions in an if/then table, which can be easier to follow, or

- using friendly graphics can help make instructions less scary.

Example: Application Process

This:

If	Then
If you want to work in programing:	•Make a resume. •Get some sample code that you wrote. •Send them to programing@example.com.
If you want to work in design:	•Make a resume. •Get some sample pages that you designed. •Send them to design@example.com.

Not:

If you want to work in programing, write to programing@example.com with a resume and sample code that you wrote. If you want to work in design, write to design@example.com with a resume and sample pages.

Tal: Student with Dyslexia, Impaired Eye Hand Coordination

Problem: As a slow reader it takes me ages to read through badly structured text and I often miss important information.

Works well: The newsletter has headings so I can find the important information quickly.

Sample User Needs:
- Make it easy to find the most important tasks and features of the site
- Make it easy to find the most important actions and information on the page
- Provide a login that does not rely on memory or other cognitive skills
- Allow the user a simple, single step, login
- Provide a login alternative with less words

Provide a Login that Does Not Rely on Memory or Other Cognitive Skills

Users can login, register, and reset credentials, without having more cognitive abilities then they need to use a simple web page.

They do not have to:

- memorize character strings,
- perform calculations,
- copy content,
- answer puzzles,
- reliably reproduce gestures, or
- recognize characters presented on screen, and then enter them into an input field.

Yuki: A Yoga Teacher who has AD(H)D

Problem: As a slow reader it takes me ages to read through badly structured text and I often miss important information.

Works well: The newsletter has headings so I can find the important information quickly.

Sample User Needs:
- Break media into chunks
- Provide summary of long documents and media
- Limit interruptions
- Avoid too much content
- Provide information so a user can complete and prepare for a task
- Make short critical paths

Break Media into Chunks

- Provide a logical organization and structure that is easy to navigate.
- Divide long pieces of media into segments that are:
  - logical,
  - short,
  - labeled,
  - easy to identify, and
  - easy to reach or jump to

Examples: Brunswick Museum and Yoga Video

Brunswick's e.Museum!

Brunswick Heritage Museum's e.Musem!

Admission to e.Museum! is FREE!

Donations are greatly appreciated and can be sent through PayPal below.

VIDEOS

Marvin E. Younkins Promo Video

1986 Brunswick Little League World Series Team Video

Brunswick History 101:

Episode 1: Introduction

Episode 2: Geology

Episode 3: Native Americans

Episode 4: Names of Brunswick

5 day fit YOGA 1
one
two
three
four
five

GAIAM
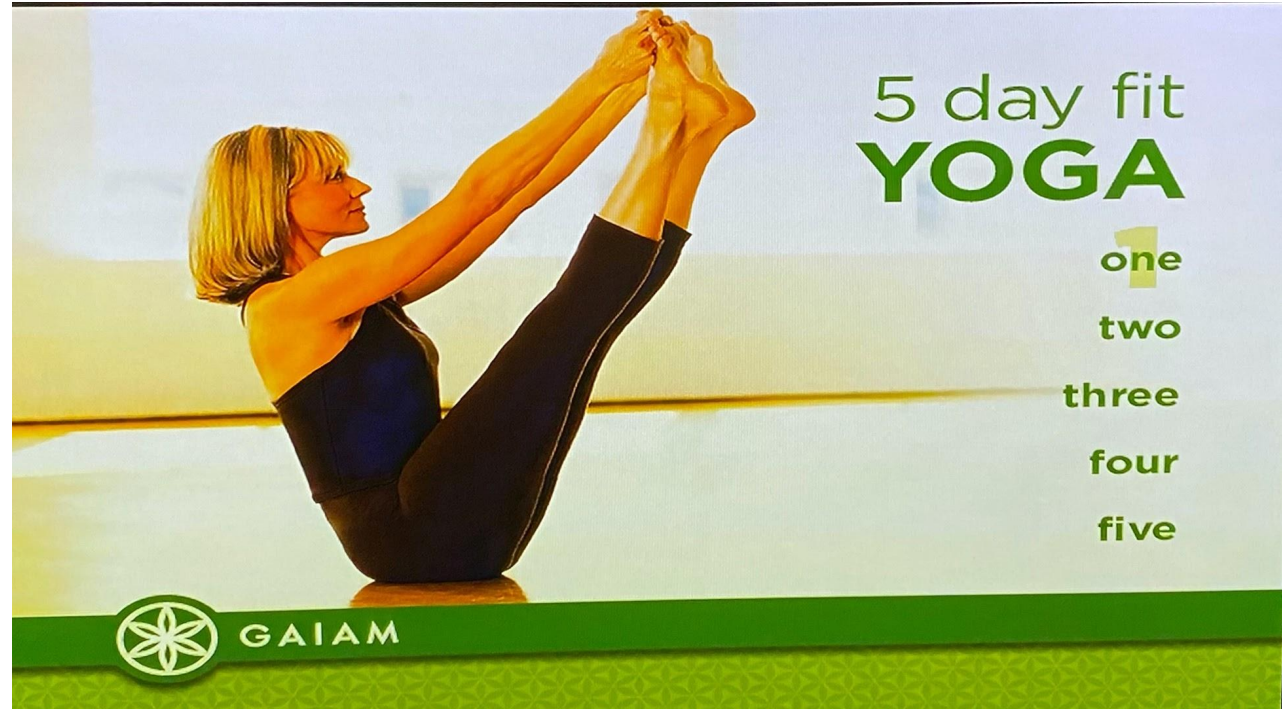
Plain Language / Clear Language

- Key parts of plain language
    - Use common words – define uncommon words
    - Use a simple tense and voice
    - Avoid double negatives
    - Avoid nested clauses
    - Keep text succinct
    - Use lists for list content

- References:
    - [Making Content Usable - Use Clear and Understandable Content](#)
    - [PlainLanguage.gov](#)

Which Do YOU understand faster?

A Landlord's Right to Deduct. When a tenant moves into a rental property, he or she will pay the landlord a security deposit. Depending on the jurisdiction, this deposit will be returned to the tenant within a specific time period at the cessation of the lease term, as long as the tenant follows all the terms and tenants of the lease agreement or contract. Select links below to read the laws that pertain to your situation.

Your landlord must follow the law.

- Your landlord can only use your security deposit (promise money), for certain things, such as unpaid rent (rent that you owe) and to fix things that you damage.

- Your landlord must return your security deposit (promise money) to you by a clear date. This is usually 30 days after you leave the apartment.

Next Steps

1. Get a copy of these slides
2. Check out the references
   - [Making Content Usable](#)
   - [PlainLanguage.gov](#)
3. Try out what you learn, get feedback, and iterate
4. Include individuals with cognitive and learning disabilities in user testing

Lisa's slides

Making Content Useable

Making Content Usable for People with Cognitive and Learning Disabilities
W3C Working Draft 17 July 2020

This version:
https://www.w3.org/TR/2020/WD-coga-usable-20200717/

Latest published version:
https://www.w3.org/TR/coga-usable/

Latest editor's draft:
https://w3c.github.io/coga/content-usable/

Previous version:
https://www.w3.org/TR/2020/WD-coga-usable-20200327/

Editors:
Lisa Seeman (Invited expert)
Rachael Montgomery (Invited expert)
Steve Lee (W3C)
Ruoxi Ran (W3C)

This document is also available as multiple pages, with separate pages for each section.

for People with Cognitive and Learning Disabilities

Making Content Useable

Objectives

- User Stories (with user needs)
- Design Guide (with design patterns)
- User Testing
- Persona

Objectives
With user needs, design patterns and user tests

Help users understand what things are and how to use them. Such as: Use familiar design patterns.

Help users find what they need and navigate the page and site

Use clear and understandable text and images. Such as: easy words, short blocks of text, video.

Provide support for different ways to understand content. Graphics, summaries of long documents

Help users avoid mistakes and correct them when they occur. A good design will make errors less likely.

Help users to maintain focus. Avoid distracting the user from their task. If they do get distracted, help them re-orientate themselves.

Ensure processes do not rely on memory. Such as passwords and voice menus that involve remembering a specific number or term.

Make it easy to get human help and give feedback - Test this and promote it!

Support adaptation and personalization. People with cognitive disabilities often use add-ons or extensions as assistive technology.

Objectives
With user needs, design patterns and user tests

Help users understand what things are and how to use them. Such as: Use familiar design patterns.

Help users find what they need and navigate the page and site

Use clear and understandable text and images. Such as: easy words, short blocks of text, video.

Provide support for different ways to understand content. Graphics, summaries of long documents

Help users avoid mistakes and correct them when they occur. A good design will make errors less likely.

Help users to maintain focus. Avoid distracting the user from their task. If they do get distracted, help them re-orientate themselves.

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Make it easy to get human help and give feedback - Test this and promote it!

Support adaptation and personalization. People with cognitive disabilities often use add-ons or

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Any questions?

With thanks to:

Lisa Seeman

coga/wiki

COGA, Making Content Useable (and other work)

Making Content Usable for People with Cognitive and Learning Disabilities
W3C Working Draft 17 July 2020

This version:
https://www.w3.org/TR/2020/WD-coga-usable-20200717/

Latest published version:
https://www.w3.org/TR/coga-usable/

Latest editor's draft:
https://w3c.github.io/coga/content-usable/

Previous version:
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Editors:
Lisa Seeman (Invited expert)
Rachael Montgomery (Invited expert)
Steve Lee (W3C)
Ruoxi Ran (W3C)

This document is also available as multiple pages, with separate pages for each section.

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What I hope to cover:

- Background, the COGA task force and the work
- Making Content Useable
- Next steps

The **Cog**nitive and Learning Disabilities **A**ccessibility Task Force (COGA)

Accessible Platform Architectures WG

Accessibility Guidelines WG

COGA Task Force
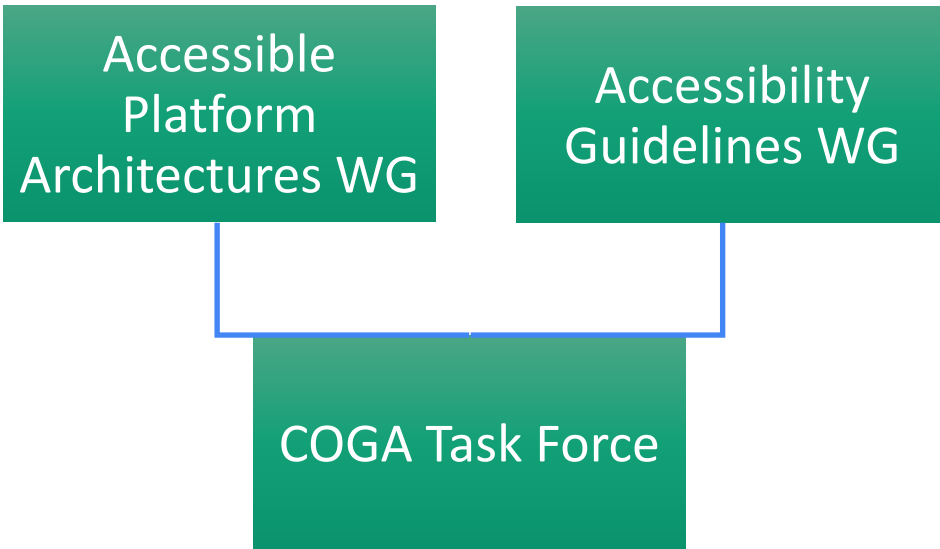
Goal: To improve Web accessibility and usability for people with cognitive and learning disabilities.

Challenges:

Many types of disabilities
Research behind pay walls
Attitudes / Undeclared
Author burden

User Research

Issues Papers

Gap Analysis and Roadmap

WCAG SC

Making Content Useable

Semantics Metadata

AT, Browsers and Cross Domain

All on our wiki

User Research

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WCAG SC

Making Content Useable

Semantics

Metadata

AT, Browsers and Cross Domain

All on our wiki

User Research (Phase 1)

- Dyslexia
- Dyscalculia
- ADD/ADHD
- Non-verbal (brain injury, aphasia)
- Mild Cognitive Impairment (MCI)
- Dementia
- Intellectual disability (down syndrome)
- ASD

See https://w3c.github.io/wcag/coga/user-research.html

Issue Papers (Phase 1) Security example

Issues:
- Prevents people from using the system at all
- Too many steps to authenticate
- User can't remember passwords

Potential solutions:
- Biometrics
- Key tokens delivered through USB
- Near Field Communication (NFC) readers
- New authentication specifications with handshaking

See https://w3c.github.io/coga/issue-papers/

User Research

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Gap Analysis and Roadmap

WCAG SC

Making Content Useable

Semantics Metadata

AT, Browsers and Cross Domain

All on our wiki

Enable Personalization through semantics & metadata

Some of the reasons personalization is essential for full usability include:

- Different user needs can conflict

- Learning new designs could be confusing for some users, and they should be able to continue using the design patterns familiar to them

- Making content predictable is necessary for some users, but may be considered boring by the design community

- Enables changing the degree of complexity as the user's skills improve or decrease over time or context

- Necessary for providing alternative content tailored for the user group's needs, such as a simplified version of the text

https://www.w3.org/TR/personalization-semantics-content-1.0/

Article   Edit   Discuss

How to Make a Good Cup of Tea

ⓘ Author Info | Video Team Tested

In this Article: ■ Article Summary ■ Setting Up ■ Steeping ■ Serving ❓ Community Q&A ■ References

Good tea is not just something hot to drink. It's a beverage that's steeped in romance and ritual, and a history filled with everything from quiet ceremonial tradition to colonial imperialism to turning Boston Harbor into a giant teapot (not fit for drinking).

Tested By:
wikiHow Video Team

Co-authors:	Updated:	Views:
125	15 days ago	1,074,451

80% of readers found this article **helpful**.

★★★★☆ 56 votes - 80%

Click a star to add your vote

BT **Burt Tyrell**
Aug 21, 2016

"I found this article very helpful for making a good cup of tea. I find that tea bags do not give a good flavor, and..." more

More success stories   Share yours!

Part **1**   **Setting Up**

Article Edit Discuss

⃝How ▢⃞to ⭘Make a Good ☕Cup of Tea

ⓘAuthor Info | Video Team Tested

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$ Advertisement

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Making Content Useable

User Settings Metadata

AT, Browsers and Cross Domain

All on our wiki

Making Content Useable

- Summary (easy reading)
- Background
  - ⬚ **Building the user into the development process**
    - Requirements and focus group
    - Developers and researchers
    - User testing
- User Stories
  - By objective
  - User needs
- Design Guide
  - Design patterns
  - By objective
- User Testing
- Persona
  - Challenges
- Appendix
  - – Mapping: persona challenges patterns.
  - – Business considerations
  - – Testable statements (needs more work)

Making Content Usable for People with Cognitive and Learning Disabilities

W3C Working Draft 17 July 2020

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Getting started - urgent content

Basic usability: Take a small amount of time to check if the design is usable by everyone
- Look at our short "ten tips" guidance
- Follow accessibility guidance from WCAG 2.1

Give clear information: Give concrete information, in simple plain language. Try to give the information needed, but not more. Such as:
- Timelines, are delays expected? What happens next?
- How to get more help, Identify the best place to get information, and who is telling you. Who is the authority.

Set up useable feedback channels: If groups of people can not give feedback you will never know if they can use your content! Promote the channels. Feedback mechanisms must be really easy to use. For example:
- Use simple clear language and short chunks of text, separated with white space and symbols.
- Email addresses should open the email application, and phone numbers should dial on a click and take you to a human operator (many vulnerable people can not manage to navigate voice menu systems)

Test: For example, check that real users can quickly and easily get through the process of finding the information they need and giving feedback and asking for more help. Such as: People with age-related forgetfulness, people with communication disabilities, a screen reader, user people with "chemo brain",

Making Content Useable – Next Steps

Currently at "wide review" draft

- Note published November/December (in time for WCAG 2.2)
  - Address issues and comments
  - Edits and review
  - Images for examples per objective
  - Small glossary

- Updates possible (probable)
  - Larger glossary
  - Glossary enlarged
  - Testable statements for each pattern
  - Draft issue papers: Conversational interfaces, navigation, mental health
  - IE: We start again

User Research

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WCAG -> Silver

Making Content Useable

Semantics
Metadata

AT, Browsers and Cross Domain

All on our wiki

Any questions?

Lisa Seeman

coga/wiki
lisa.seeman@zoho.com

About COGA:
The **Cog**nitive and Learning Disabilities **A**ccessibility Task Force

🎯 **Goal:**

Improve web accessibility and usability for people with cognitive and learning disabilities and differences

💪 **Challenges:**

- Complex and varied space with many types of disabilities
- Research is often blocked behind paywalls
- Conscious and subconscious attitudes and misunderstandings
- Author burden

Parent Working Groups

APA WG
Accessible Platforms and Architectures

AG WG
Accessible Guidelines (WCAG)

COGA TF
Cognitive Accessibility