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Annotation as a Tool  
for Accessibility for  
Blind and Vision  
Impaired Students

<http://tinyurl.com/annotation4a11y>



Annotation can be a powerful tool for addressing accessibility of non-textual content on the web and in eBooks

# How Blind & VI Students Read



- Videos of blind students reading
  - <http://www.youtube.com/watch?v=fdxL88jXQjE>
  - <http://www.youtube.com/watch?v=ho-y-5qzWa0>
- Bookshare Web reader
- Read2Go
- Kindle
  - [http://www.youtube.com/watch?v=fRY7pAa6a\\_o](http://www.youtube.com/watch?v=fRY7pAa6a_o)

# Visual Content is Challenging



- Images tend to lack proper descriptions
- Mathematics often rendered via images
  - MathML has poor adoption by web browsers and reading systems
- Video description has even less support

# Current State



Blind and vision impaired students often require support to access the knowledge provided by non-textual elements

- Disability Support Services (DSS) offices in Higher Ed
- Teachers and aides
- Parents
- Friends

# Disparate Enabling Tools



- Poet
- YouDescribe
- WebVisum

# Poet – Image Description Tool



Poet Image Description

Books Guidelines Help User Profile Admin gerardoc

CK-12 Algebra 1 Second Edition Volume 2 -1

Show book part 1 Select  
Show All Images Select 156  
Images  
Go to Image #   
go


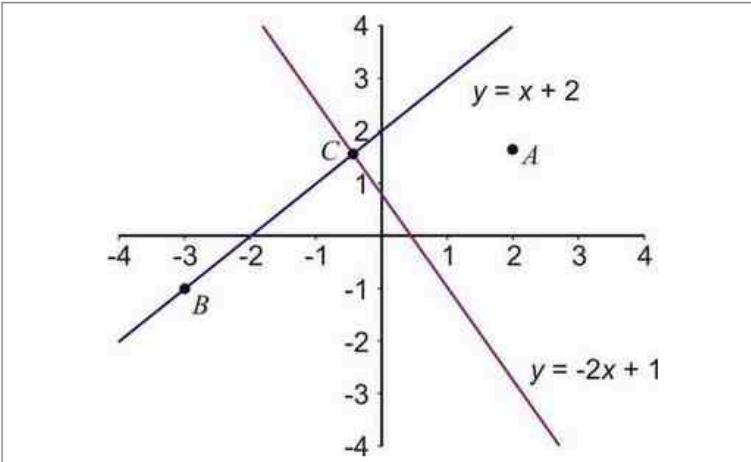


Image Number: 208255  
Should be described: Unspecified Select  
Type: Line Graph Select

**A**  
Image Number: 208256  
Should be described: Unspecified Select  
Type: -- Choose one -- Select

**B**  
Image Number: 208257  
Should be described: Unspecified Select  
Type: -- Choose one -- Select



Alt Text: (No description provided by publisher)

Guidelines for Describing Line Graphs  
[Link to Full NCAM Guideline](#)

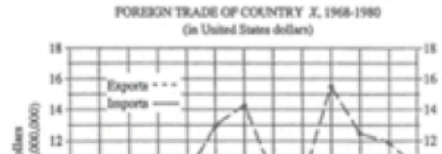
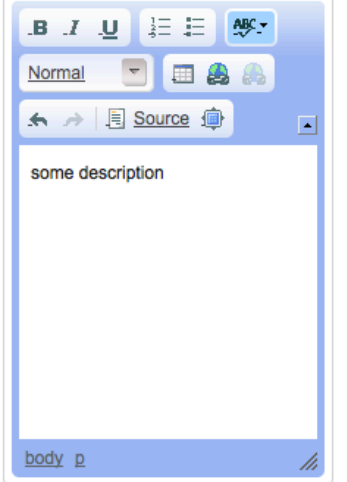


Image Number: 208255 ([view original size](#))  
Image Category: Line Graph  
Long Description  
[Edit](#) [Preview](#)



body p

Show/Hide Math Helper

<http://diagramcenter.org/development/poet.html>

# YouDescribe – Video Description

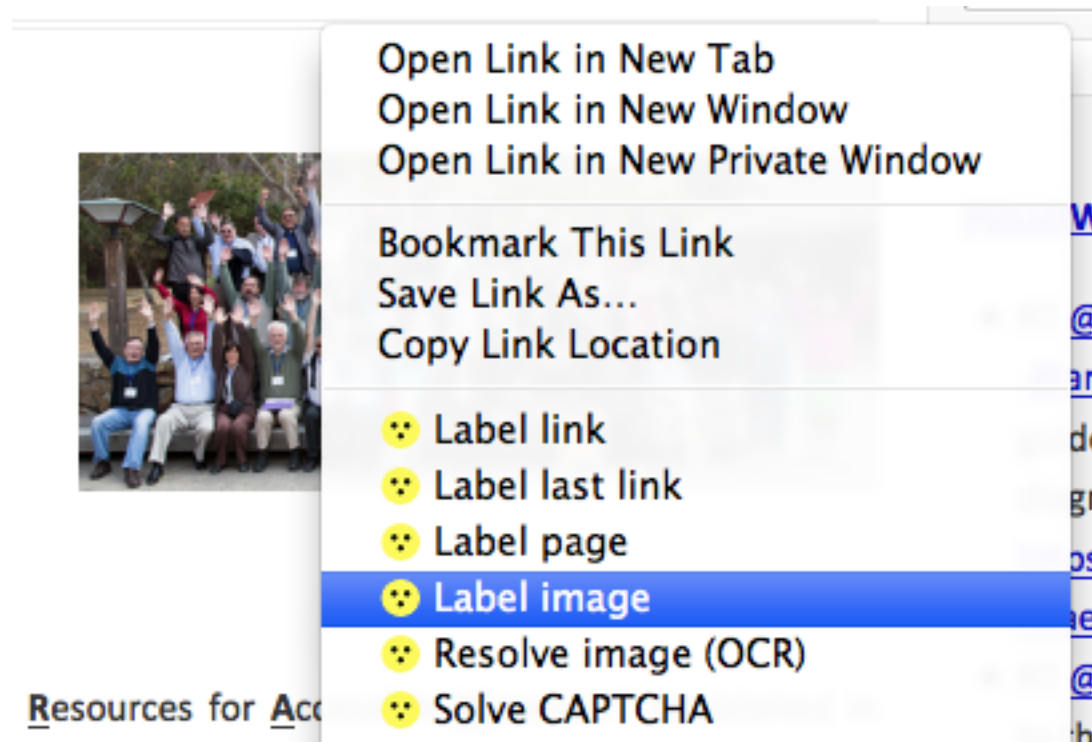


Video can be paused for a describer to record a verbal description

<http://youdescribe.ski.org>



# WebVisum – Firefox Add-on



<http://www.webvisum.com/>

# Requirements for Annotations



- Accessible user experiences
- Support for granular image annotation
- Annotations in HTML and MathML markup
- Mechanism to request annotations from sighted users
- Metadata to identify the annotations as alternatives
- Mechanism for original publishers to query, analyze and pull-in "crowdsourced" descriptions and transcriptions

# Conclusion



- Annotation can be a powerful tool for addressing accessibility of non-textual content on the web and in eBooks
- It's happening today with disparate tools
- We need a unified and standard mechanisms, so that the efforts of a few “Good Samaritans” can have broader impact
- Help move this vision forward at the Dev-Hack Day

[gerardoc@benetech.org](mailto:gerardoc@benetech.org) | [@gcapiel](#)

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