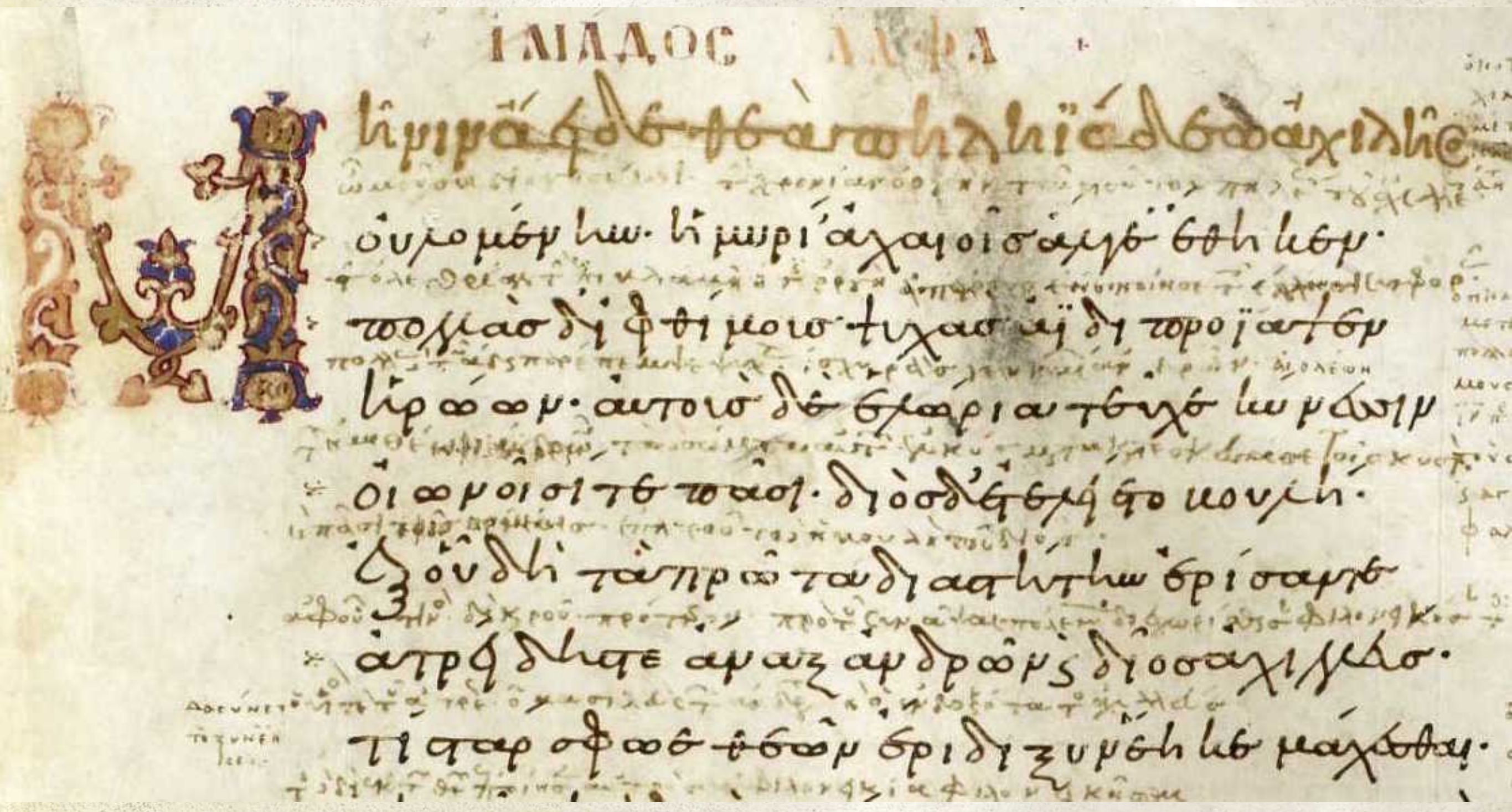


# THE HOMER MULTITEXT





The research question:



# Transmission and the Homeric Question

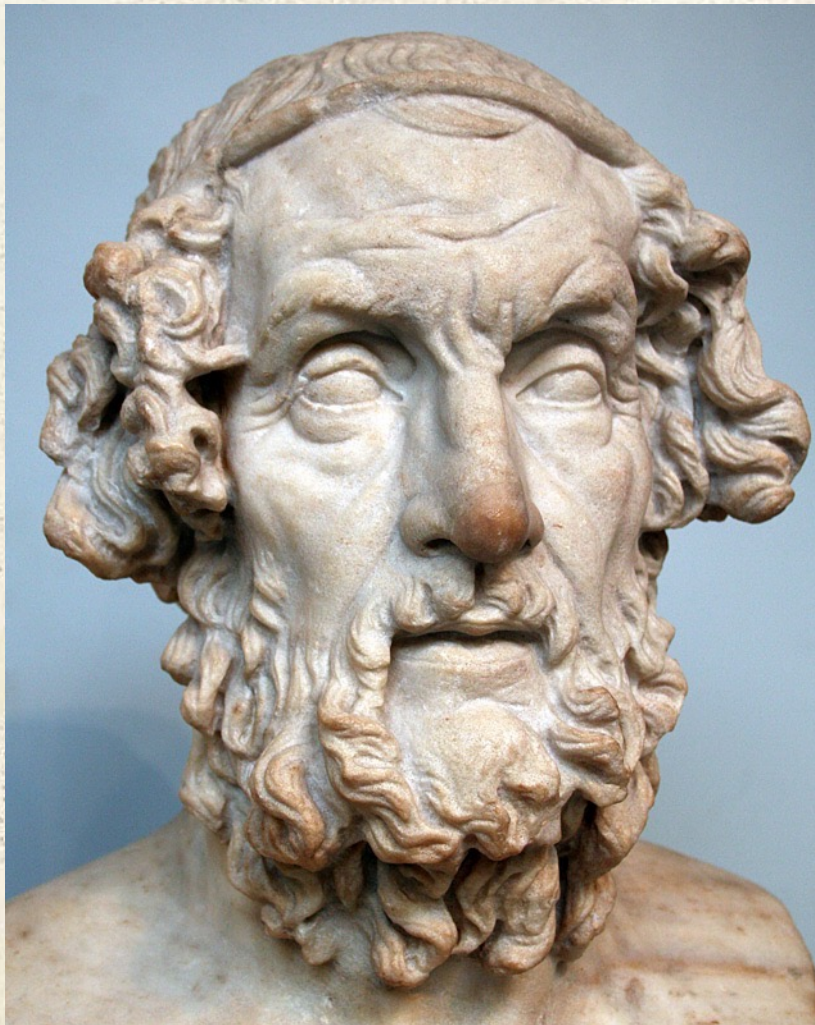


Image from Wikimedia Commons

- who was “Homer”?
- textual criticism
- manuscript transmission
- an oral tradition



A proposed answer:



# The Homer Multitext

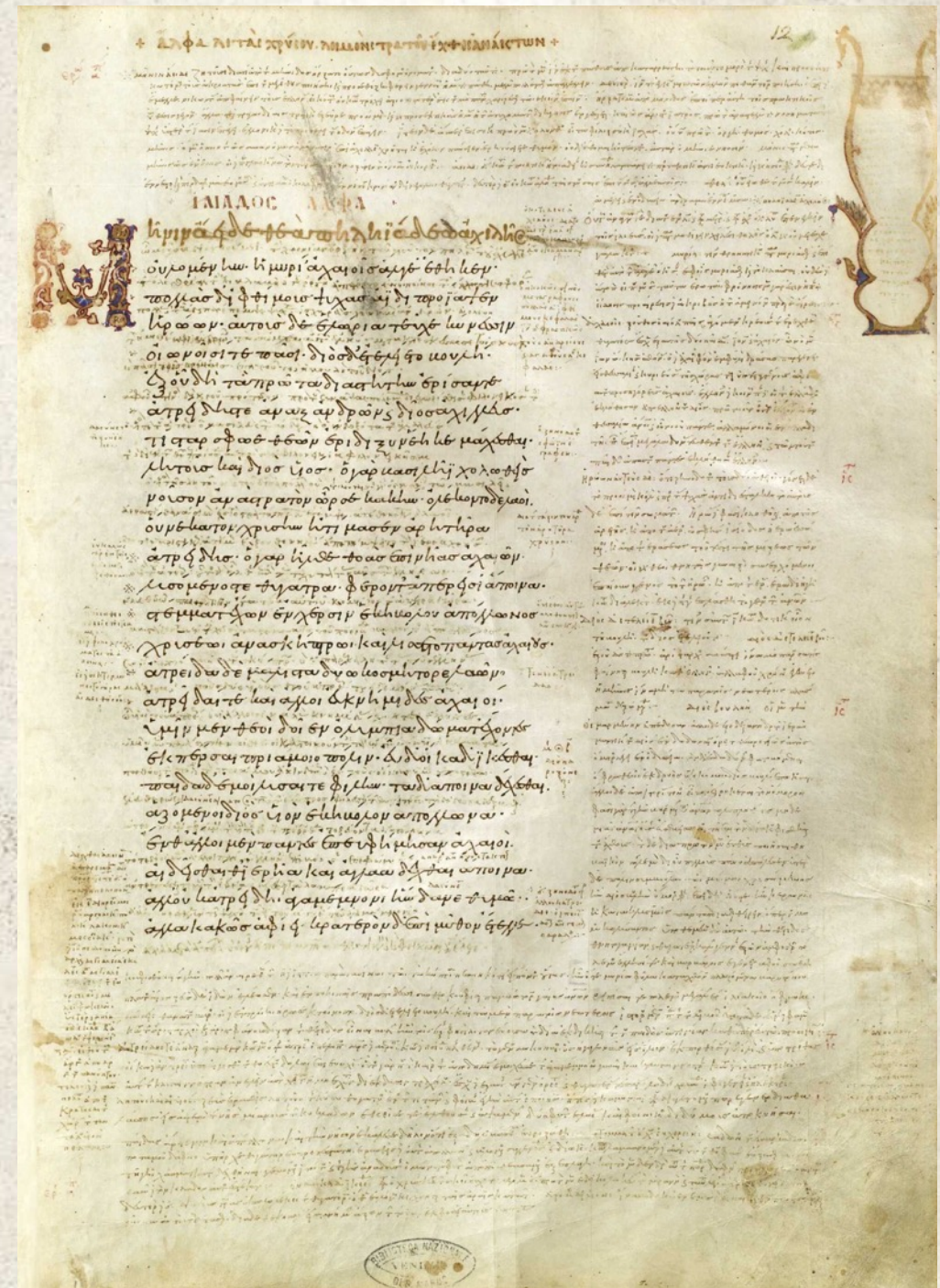
Center for Hellenic Studies (Harvard University)

<http://www.homermultitext.org/>



# Representing Multiformity

- digital data
  - photography
  - diplomatic editions
  - related data
- open access
  - CC BY-SA
- standards-based technology





# The digital structure



# CITE Architecture

- Collections, Indexes and Texts
- method of citing and linking discrete texts and objects
- Canonical Text Service URN for every text

`urn:cts:greekLit:tlg0012.tlg001:1.10-1.20`

- Collection URN for every object

`urn:cite:hmt:u4img.U4004RN-0007@0.46,0.3028,0.127,0.0323`

- CITE Index links URNs with each other and other data
  - triples: nodes connected by arcs



# CITE Architecture

- developed for the Homer Multitext project
- now used by many other projects, including Open Greek and Latin at Universität Leipzig




The digital data



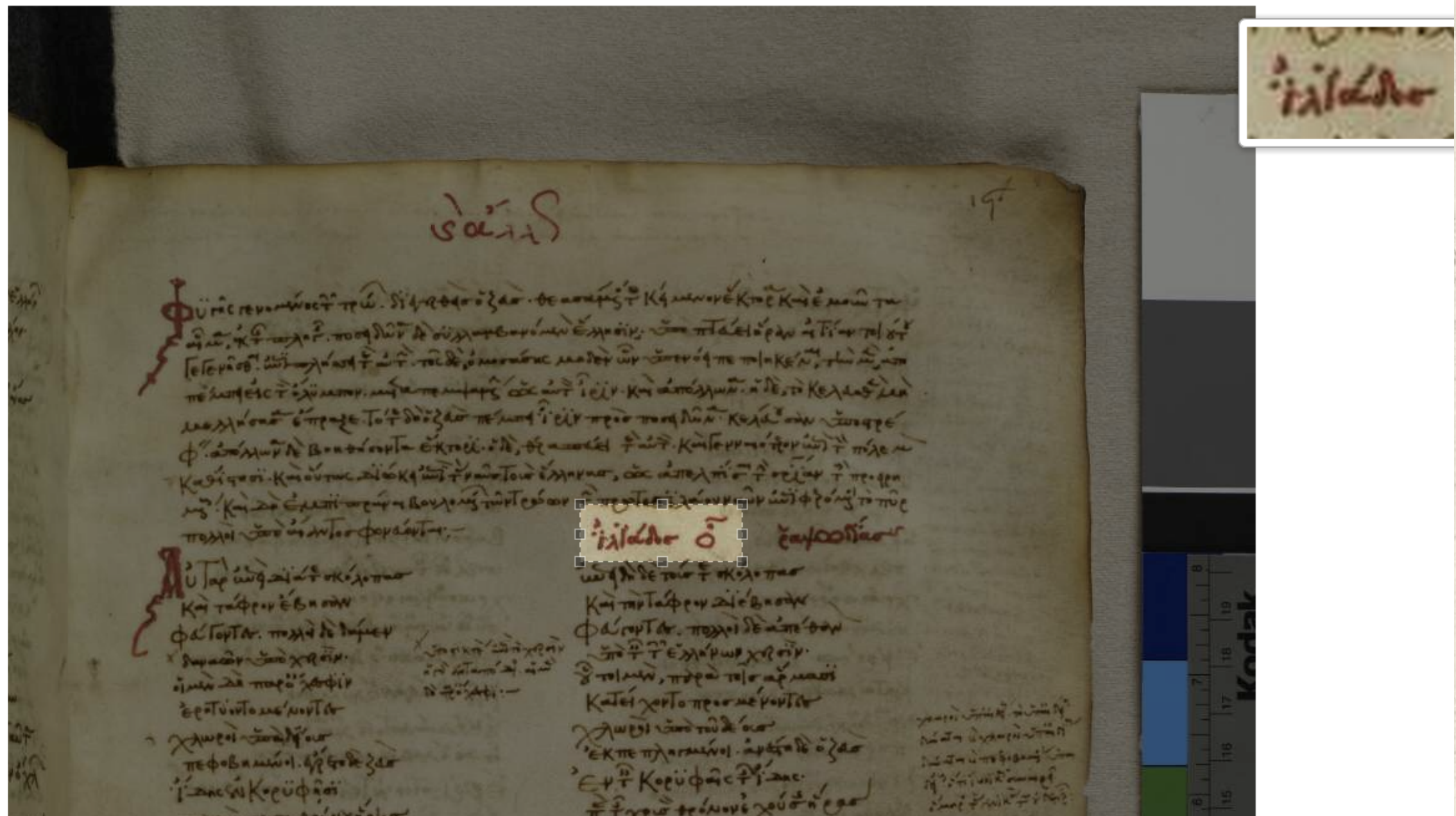
# Image Citation

## Image Citation Tool

Right-click here to copy URN 


urn:cite:hmt:u4img.U4004RN-0007@0.458,0.3005,0.131,0.0353

[Focus on Selection](#) | [See Selection](#) | [Selection in Context](#)







# Venetus A 15 in Github



 **HCMID / venA-15** Watch 7







Iliad 15 in the Venetus A MS


75 commits 1 branch 0 releases 4 contributors

 branch: **master** **venA-15** / + 

Update MainScholia.xml

 **cjschu17** authored a day ago latest commit d616a1a005 

 Collections	Update venA-mainScholia.csv	13 days ago
 Indices	Update venA-textToImage-Iliad.csv	a month ago
 configs	messing with config again	5 months ago
 editions	Update MainScholia.xml	a day ago
 scripts	tons of stuff for verification	5 months ago
 README.md	Initial commit	7 months ago

 **README.md**

## venA-15

Iliad 15 in the Venetus A MS

<https://github.com/HCMID/venA-15>



# Venetus A I5 in Github

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <?xml-model href="http://www.tei-c.org/release/xml/tei/custom/schema/relaxng/tei_all.rng" schematypens="http://relaxng.
3
4 <?xml-stylesheet type="text/css" href="../../../css/tei-iliad.css"?>
5 <TEI xmlns="http://www.tei-c.org/ns/1.0">
6   <teiHeader>
7     <fileDesc>
8       <titleStmt>
9         <title>Iliad</title>
10        <editor>Nikolas Churik</editor>
11        <editor>Charlie Schufreider</editor>
12      </titleStmt>
13      <publicationStmt>
14        <p>Unpublished edition of the Venetus A manuscript for the Homer Multitext project</p>
15      </publicationStmt>
16      <sourceDesc>
17        <p>Edited directly from photography of the manuscript</p>
18      </sourceDesc>
19    </fileDesc>
20  </teiHeader>
21  <text>
22    <body>
23      <div n="15">
24        <l n="1">Αὐτὰρ ἐπεὶ διὰ τε σκόλοπας καὶ τάφρον ἔβησαν</l>
25        <l n="2">φεύγοντες. πολλοὶ δὲ δάμεν Δαναῶν ὑπο χερσίν.</l>
26        <l n="3">οἱ μὲν δὴ παρ' ὄχεσφιν ἐρητύοντο μένοντες</l>
27        <l n="4">χλωροὶ ὑπαὶ δείους. πεφοβημένοι. ἔγρετο δὲ <persName n="urn:cite:hmt:pers.pers8">
28          >Ζεὺς</persName></l>
29        <l n="5"><placeName n="urn:cite:hmt:place.place89">Ἴδης</placeName> ἐν κορυφῇσι. παρα
30          χρυσοθρόνου <persName n="urn:cite:hmt:pers.pers116">Ἥρης</persName>·</l>
31        <l n="6">στῇ δ' ἄρ' ἀναΐξας· Ἴδε δὲ <rs type="ethnic" n="urn:cite:hmt:place.place6">
32          >Τρῶας</rs> καὶ <rs type="ethnic" n="urn:cite:hmt:place.place96">Ἀχαιοὺς</rs>.</l>
33        <l n="7">τοὺς μὲν ὀρινομένους. τοὺς δὲ κλονέοντας ὀπισθεν.</l>
34        <l n="8"><rs type="ethnic" n="urn:cite:hmt:place.place114">Ἀργεῖους</rs>. μετὰ δέ σφι
35          <persName n="urn:cite:hmt:pers.pers47">Ποσειδάωνα</persName> ἄνακτα·</l>
36        <l n="9"><persName n="urn:cite:hmt:pers.pers172">Ἐκτορα</persName> δ' ἐν πεδίῳ Ἴδε κείμενον
37          ἀμφὶ δ' ἐταῖροι</l>
38        <l n="10">εἶαθ'. ὁ δ' ἀργαλέῳ ἔχετ' ἄσθματι. κῆρ, ἀπινύσσων.</l>
39        <l n="11">αἶμ' ἐμέων. ἐπεὶ οὐ μιν ἀφανρότατος βάλ' <rs type="ethnic"
40          n="urn:cite:hmt:place.place96">Ἀχαιῶν</rs>·</l>
41        <l n="12">τὸν δὲ Ἴδων ἐλέησε πατὴρ ἀνδρῶν τε θεῶν τε.</l>
42        <l n="13">δεινὰ δ' ὑπόδρα Ἴδων <persName n="urn:cite:hmt:pers.pers116">Ἥρην</persName> πρὸς
43        μῦθον ἔειπεν.</l>
```



# Venetus A 15 in Github

branch: master venA-15 / Indices / venA-folioTolmage.csv

StephanieML on Nov 14, 2014 tons of stuff for verification

1 contributor

656 lines (655 sloc) 37.774 kb

Raw Blame History

Search this file...

1	urn:cite:hmt:msA.1r	urn:cite:hmt:vaimg.VA001RN-0002
2	urn:cite:hmt:msA.1v	urn:cite:hmt:vaimg.VA001VN-0503
3	urn:cite:hmt:msA.2r	urn:cite:hmt:vaimg.VA002RN-0003
4	urn:cite:hmt:msA.2v	urn:cite:hmt:vaimg.VA002VN-0504
5	urn:cite:hmt:msA.3r	urn:cite:hmt:vaimg.VA003RN-0004
6	urn:cite:hmt:msA.3v	urn:cite:hmt:vaimg.VA003VN-0505
7	urn:cite:hmt:msA.4r	urn:cite:hmt:vaimg.VA004RN-0005
8	urn:cite:hmt:msA.4v	urn:cite:hmt:vaimg.VA004VN-0506
9	urn:cite:hmt:msA.5r	urn:cite:hmt:vaimg.VA005RN-0006
10	urn:cite:hmt:msA.5v	urn:cite:hmt:vaimg.VA005VN-0507
11	urn:cite:hmt:msA.6r	urn:cite:hmt:vaimg.VA006RN-0007
12	urn:cite:hmt:msA.6v	urn:cite:hmt:vaimg.VA006VN-0508
13	urn:cite:hmt:msA.7r	urn:cite:hmt:vaimg.VA007RN-0008
14	urn:cite:hmt:msA.7v	urn:cite:hmt:vaimg.VA007VN-0509
15	urn:cite:hmt:msA.8r	urn:cite:hmt:vaimg.VA008RN-0009
16	urn:cite:hmt:msA.8v	urn:cite:hmt:vaimg.VA008VN-0510
17	urn:cite:hmt:msA.9r	urn:cite:hmt:vaimg.VA009RN-0010


<https://github.com/HCMID/venA-I5>



Publishing the data





# HMT Archive


 **homermultitext / hmt-archive**


Watch 2



Archival data from the Homer Multitext project

 111 commits



 3 branches














 0 releases

 1 contributor

 branch: master ▾ **hmt-archive** / + 

Update Iliad editions with full named entity tagging for 2014-2.

 St. Isidore of Seville Research Lab authored on Sep 26, 2014 latest commit [a052d05ae0](#) 

 <a href="#">cite</a>	Add Iliad 5 indexing.	7 months ago
 <a href="#">editions</a>	Update Iliad editions with full named entity tagging for 2014-2.	7 months ago
 <a href="#">inventories</a>	Comment out Proclus for 2014.1 publication.	a year ago
 <a href="#">src</a>	Add book 8 material.	a year ago
 <a href="#">teiHeaders</a>	Add headers for E3.	a year ago
 <a href="#">testdata</a>	Pass all unit tests.	a year ago
 <a href="#">utils</a>	Add util for converting old scholia editions of VenA to use complete ...	a year ago
 <a href="#">README-version-guide.md</a>	Remove tokenization from build of 2014.1 publication.	a year ago
 <a href="#">README.md</a>	Test authorization.	8 months ago
 <a href="#">build.gradle</a>	Adjust versions.	a year ago
 <a href="#">conf.gradle</a>	Update to work with CTS 5.0 spec	a year ago
 <a href="#">pub.gradle</a>	Add initial build of composite Venetus A Iliad.	a year ago
 <a href="#">versions.gradle</a>	Adjust versions.	a year ago

<https://github.com/homermultitext/hmt-archive>



# Navigating the data



# HMT Digital

Friday, August 1, 2014

## First publication of software for HMT services


In February, we announced the first publication of the HMT project's archival data. Today, we are releasing the first published version of hmt-digital, a java servlet providing digital services for working with the project archive.

Version 1.0 is now installed at <http://www.homermultitext.org/hmt-digital>, where you can routinely expect to find the currently published services using the currently published version of the data archive. We continue to run a test site at <http://beta.hpcc.uh.edu/tomcat/hmt-digital/>. The test set normally runs in-progress versions of hmt-digital, and uses unpublished versions of our data archive.

Our software, like all the data in our archive, is openly licensed. If you'd prefer to run a local installation of the hmt-digital services, you'll find instructions on the README for the project's [github repository](#).

### Links

- HMT project installation of hmt-digital 1.0: <http://www.homermultitext.org/hmt-digital>
- github repository: <https://github.com/homermultitext/hmt-digital>

Posted by Neel Smith at 11:45 AM No comments: 



Recommend this on Google

<http://homermultitext.blogspot.de/2014/08/first-publication-of-software-for-hmt.html>



# HMT Digital

Digital services from the Homer Multitext project

HMT: [home](#) | [HMT Digital: home](#) | [browse MSS](#) | [scholia](#)

---

## Browse manuscripts

### Start from MS page

Page URN

### Start from *Iliad* line

book.line

## Read scholia

Look up by full URN reference for *Iliad* passage (including MS)

Text passage URN

## Other utilities

- See an automatically generated [summary of archival material](#) (with links to browse contents)
- [Look up material by URN](#)

---

Software version: hmt-digital 1.0.1. Data set in this service: 2014.1 publication of the Homer Multitext project archive. citeservlet is free software developed by Christopher Blackwell and Neel Smith

<http://www.homermultitext.org/hmt-digital/>



# The sources



# Manuscripts and Papyri

- 7 mss currently available to the project
  - Venetus A
  - Venetus B
  - Y.I.I
  - Ω.I.I2
  - Codex Bodmer 85
  - Geneva MS Gr. 44
  - Marciana 84I
- 1 sheet of papyrus
  - Bankes papyrus



# A Large Corpus

- the *Iliad* contains:
  - 24 books
  - 15,693 lines
- in terms of pages:
  - Venetus B for example: 338 folia



# Building a Community



# Collaboration

- “Although the model for Homeric research is most often that of the individual genius working alone, we suggest that the kind of collaboration that is at the heart of the Multitext allows for a higher quality of research and analysis that can be accomplished in a more timely manner.” (Ebbott and Dué 2009)
- list of collaborating institutions



# Collaborators

- Multiple academic generations:
  - Professors and researchers
  - Graduate students
  - Undergraduate students





# College of the Holy Cross

- Worcester, MA
- undergraduate, liberal arts college
- largest undergraduate classics program

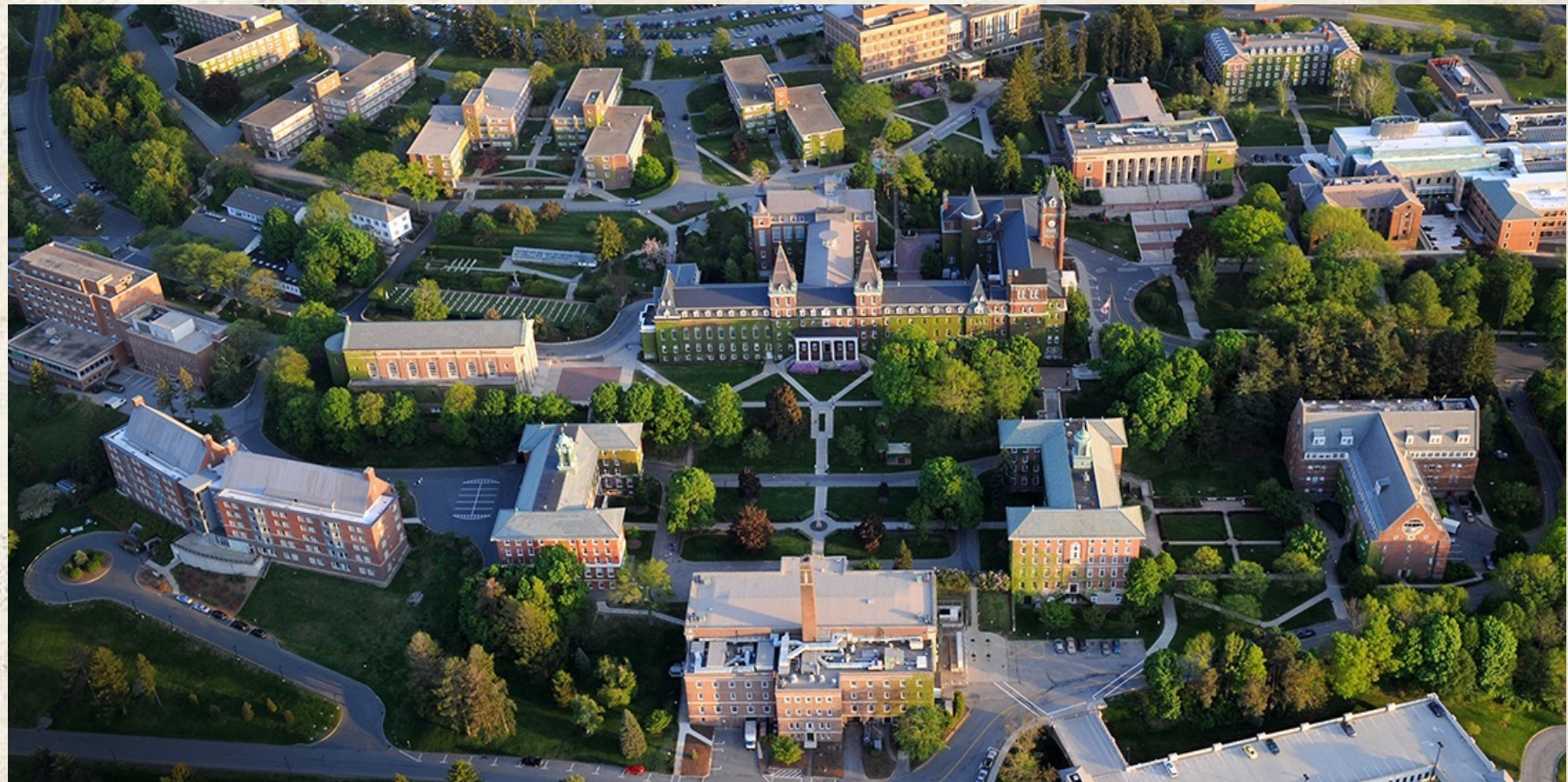
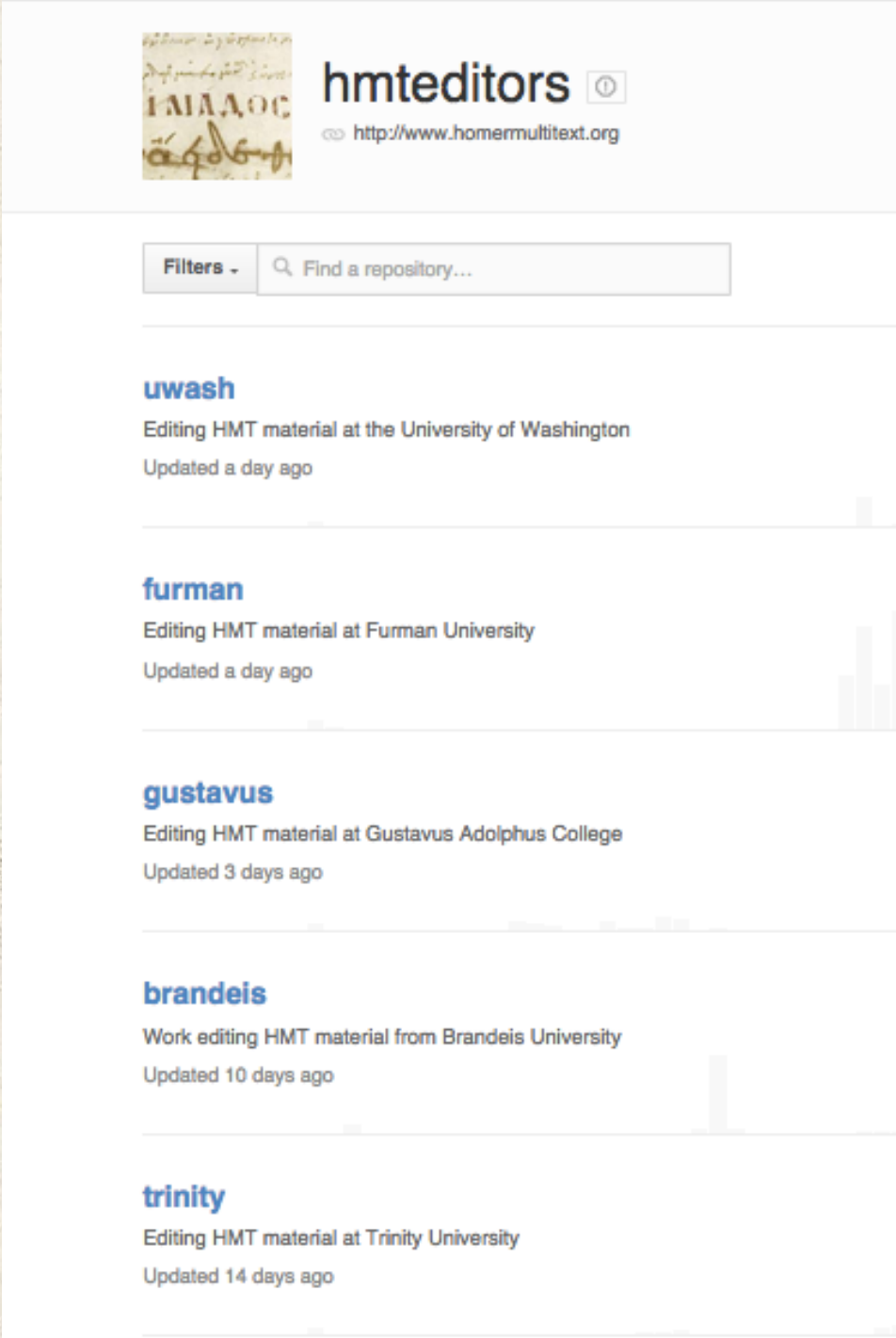


Image from <http://www.holycross.edu/>



# Collaborators

- College of the Holy Cross
- Furman University
- Brandeis University
- University of Washington
- Trinity University in San Antonio
- Gustavus Adolphus College
- Universiteit Leiden



The screenshot shows the hmteditors website. At the top left is a logo with the word 'HOMER' in a stylized font. To its right is the text 'hmteditors' with a small circular icon containing a lowercase 'i', and below it the URL 'http://www.homermultitext.org'. Below the header is a search bar with the placeholder text 'Find a repository...' and a 'Filters' button to its left. The main content area lists six collaborators, each with a name in blue, a description of their work, and the time since they were last updated. The collaborators are: uwash (University of Washington), furman (Furman University), gustavus (Gustavus Adolphus College), brandeis (Brandeis University), and trinity (Trinity University). Each entry has a small bar chart to its right.

**hmteditors** ⓘ  
http://www.homermultitext.org

Filters - Find a repository...

**uwash**  
Editing HMT material at the University of Washington  
Updated a day ago

**furman**  
Editing HMT material at Furman University  
Updated a day ago

**gustavus**  
Editing HMT material at Gustavus Adolphus College  
Updated 3 days ago

**brandeis**  
Work editing HMT material from Brandeis University  
Updated 10 days ago

**trinity**  
Editing HMT material at Trinity University  
Updated 14 days ago



# Supporting this Community



# Organization

- Academic year
  - volunteers
  - student organizations
  - classes
- Summer
  - summer research programs
  - intercollegiate summer seminar



# Workflows

- contributing to different parts of the project according to current skills
  - inventorying lines
  - creating composite images
  - identifying scholia
  - transcribing text
- git for managing multiple contributions from multiple editors



# Github and Classics Data

Monday, March 31, 2014

## Got git?


Over the past several years, github (<https://github.com/>) has emerged as the primary site for sharing openly licensed software. More recently, it has begun to assume a comparably important role in sharing openly licensed data; from the perspective of the Homer Multitext project, it's tempting to say that you can have "as many githubs as you please." (For a few examples of open datasets on github ranging from wedding invitations to arrangements of organ accompaniment for Gregorian chant, see [this recent article](#).)

While the Homer Multitext project has relied on publicly available version control systems for years, and has specifically used the git version control system since 2012, we have only recently taken advantage of github's option to group repositories by organization. To simplify the task of following the varied work in progress connected with the HMT, we have created two github organizations, `homermultitext` and `cite-architecture`.

1. Repositories for the HMT data archive and digital services of the Homer Multitext project belong to the `homermultitext` organization. See <http://homermultitext.github.io/>.
2. The CITE architecture is a generic architecture for working with citable scholarly data. It was originally developed specifically for the Homer Multitext project, and underpins all the digital work on HMT. See links to its repositories at <http://cite-architecture.github.io/>.

If you are new to version control in general or git in particular, you can probably find local expertise on your college or university campus; a little googling for help will certainly turn up an embarrassment of riches.

Christopher Blackwell and Neel Smith, project architects

Posted by Neel Smith at 6:14 PM 3 comments: 

       Recommend this on Google

Labels: [github](#), [version control](#)

[http://homermultitext.blogspot.de/2014\\_03\\_01\\_archive.html](http://homermultitext.blogspot.de/2014_03_01_archive.html)



# Resources

- guides actively produced and updated by contributors
  - paleographic guides
  - style guides
  - XML guides
- workshops scheduled at the start of the semester
- more experienced editors present for answering questions
  - in person
  - email
  - Google discussion group
  - Hangout



# Verification

- human:
  - groups checking each other's work
  - stylesheets to produce useful displays
- automated:
  - Github confirms valid CSV structure
  - Oxygen confirms valid XML structure
  - Gradle confirms data is properly structured when building the RDF graph
  - Concordion



Image from the Homer Multitext Blog: <http://homermultitext.blogspot.de/2012/07/verifying-inventory-of-scholia.html>

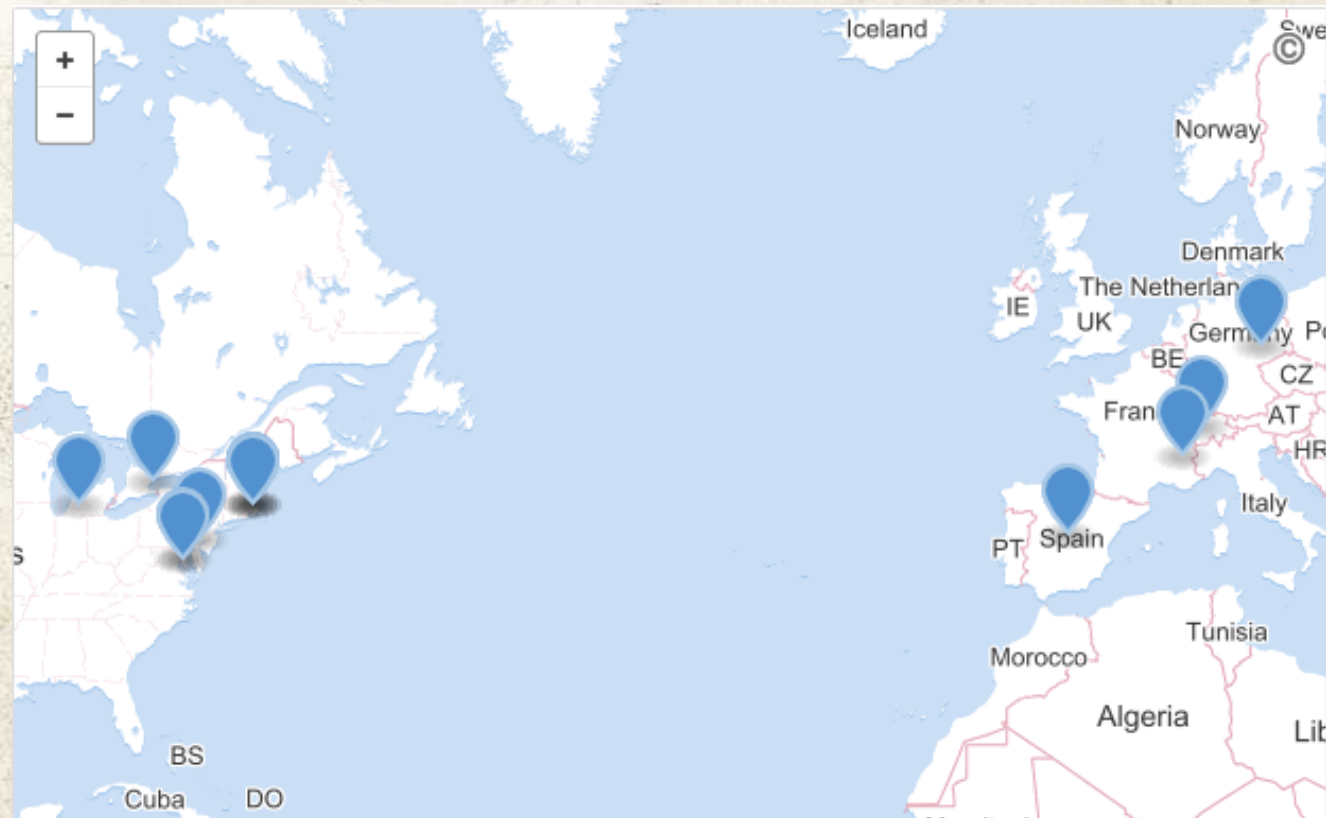


# Contributor Benefits



# Takeaways

- casual publications
  - Homer Multitext Blog: <http://homermultitext.blogspot.com>
- more formal presentations and publications
- experience with
  - research
  - Greek
  - paleography
  - codicology
  - etc.





# Related Projects



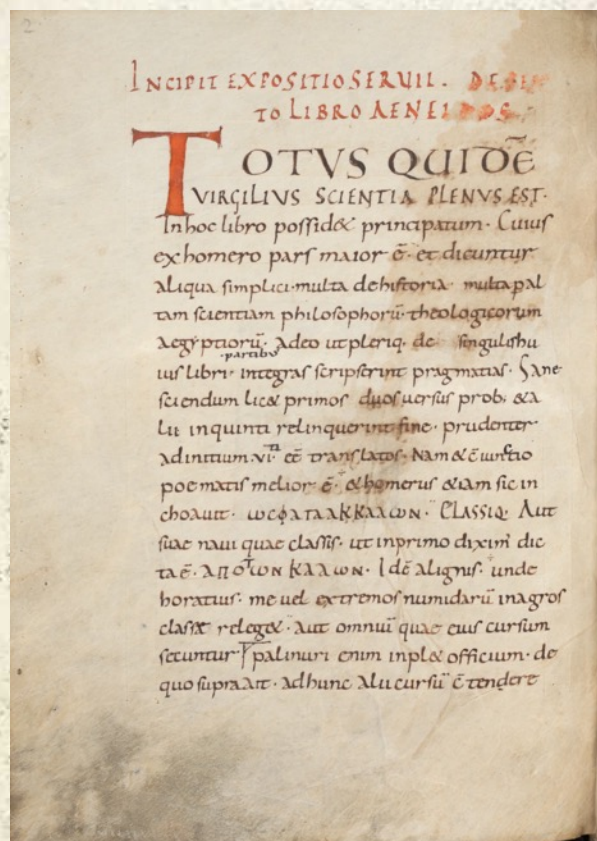
# HC's Manuscripts, Inscriptions, and Documents Club

- website: <http://hcmid.github.io/>
- ongoing projects:
  - Homer Multitext
  - Latin epigraphy
  - Greek epigraphy
  - Jerome
  - Archimedes / Greek math
- open community not limited to classics majors



# Manuscripts Challenge

- a part of HC's Classics Day
- challenge posed to high school students



Cod. Sang. 86I



Cod. Bodmer 124



VadSlg Ms. 307



Looking forward



# Great for future researchers



hmteditors / alums1

Work editing HMT material from a distributed group of HMT project veterans

- several contributors have gone on to grad school
- some remain involved in HMT or related projects



# But not only for researchers

- secondary education
- law school
- medical school
- libraries
- museums
- seminary
- etc.



# Potential Projects



Thank you!