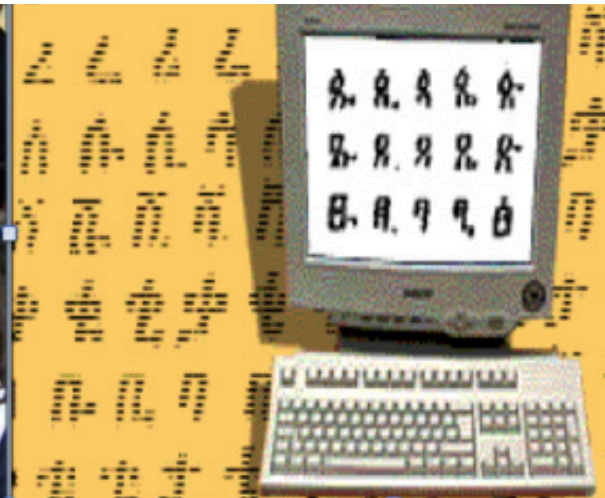


120	121	122	123	124	125	126	127
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1201	1211	1221	1231	1241	1251	1261	1271
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1202	1212	1222	1232	1242	1252	1262	1272



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Digital Ethiopic/Ge'ez

From where to where

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Fesseha Atlaw
November 30, 2017

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1202	1212	1222	1232	1242	1252	1262	1272



Overview

What is Ethiopic ?

What is Unicode ?

Font Design

Keyboard Input methods

Patents

Desktop/Laptop Application

Mobile App's

The future...

120	121	122	123	124	125	126	127
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1202	1212	1222	1232	1242	1252	1262	1272



- **Ethiopic:** Also called Ge'ez
 - 5th century BC
 - Phonetic based : *Each symbol represents a syllable consisting of a consonant plus a vowel*
 - There is no standard way of transliterating the Ge'ez script into the Latin alphabet.
 - Thus can be used any language in the world
 - Mentioned in the Bible :
 - New Testament : Book of Acts 8:26-40
 - Ethiopian nobility was reading The Book of Isaiah
 - The only copy of the Book of Enoch found written in Ethiopic

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1201	1211	1221	1231	1241	1251	1261	1271
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● Unicode

- An international encoding standard for use with different languages and scripts, by which each letter, digit, or symbol is assigned a unique numeric value that applies across different platforms and programs.
- ASCII uses an 8-bit encoding while Unicode uses a variable bit encoding
 - Unicode is standardized while ASCII isn't
 - Unicode represents most written languages in the world while ASCII does not
 - Ethiopic proposed to the Unicode in 1990 (F. Atlaw & J. Becker)
 - Revised by a group in 1993 and 1995

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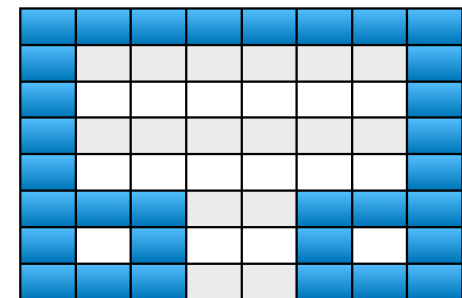
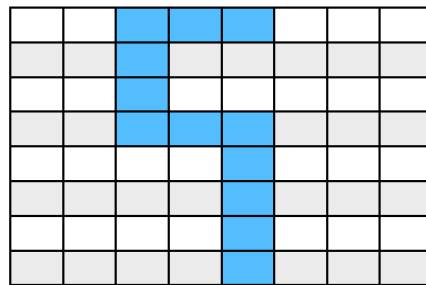
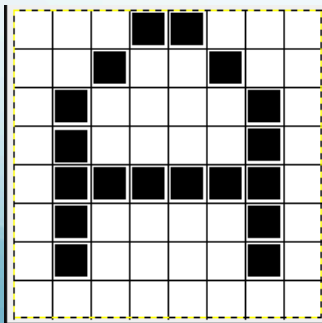


• Fonts Design

- First designs were designed pixel by pixel
- In ASCII environment Limited
- Unicode made it possible for wide fonts
- Scanning
 - Font design software became available
- Now there are 1000's of Ethiopic fonts

ኀ

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Ethiopic Fonts

<http://www.ethiohahu.com>

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ኢትዮ ሀላ ቱቦ ቀጭን።

ኢትዮ ሀላ ቋጠሮ ።



ኢትዮ ሀላ ንፍሰ ።

ጠዳላታና ጠዳታቸው



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Ethiopic							
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1201	1211	1221	1231	1241	1251	1261	1271
ሂ	ሐ፡	ሢ	ሰ፡	ቂ	ቐ፡	ቢ	ተ፡
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The Unicode Chart

- <https://www.unicode.org/charts/PDF/U1200.pdf>

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ሂ	ሐ	ሢ	ሰ	ቂ	ቐ	ቢ	ተ
1202	1212	1222	1232	1242	1252	1262	1272



● Keyboard Input Methodology

- Not a Technical issue
- Anyone can design Input methodology in few hours
 - Developers software available
 - The schema can be patented or Copyrighted
- There is no standard but that doesn't mean App's and software are not compatible with each other
- For example to type “v”

Some type : “HA” Some “HV” and some just “ H”

if you Google Ethiopic U+1200 you get this :





The Story of U (U+1200)

Unicode Character 'ETHIOPIC SYLLABLE HA' (U+1200)



Browser Test Page
Outline (as SVG file)
Fonts that support U+1200

Unicode Data

Name	ETHIOPIC SYLLABLE HA
Block	Ethiopic
Category	Letter, Other [Lo]
Combine	0

- You can design your own keyboard and
- You assign keys (h+a) or (h+v) to U+1200
- This process is too easy so many are designing their own schemas and *Patent* them..

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● Applications :

● 1000's of Ethiopic Applications

● Anything you can do with English Text you can do with Ethiopic

- MS Excel/Word and PPT
- Neon Signs ; Fancy Animations
- Programming in Amharic
- Design hardware & electro mechanical devices that use Ethiopic

● Not a Technical issues

● Anyone can design Input methodology in few hours

- Developers software available
- The schema can be patented or Copyrighted

● There is no standard but that doesn't mean App;s and software are not compatible with each other

● For example to type “ሀ”

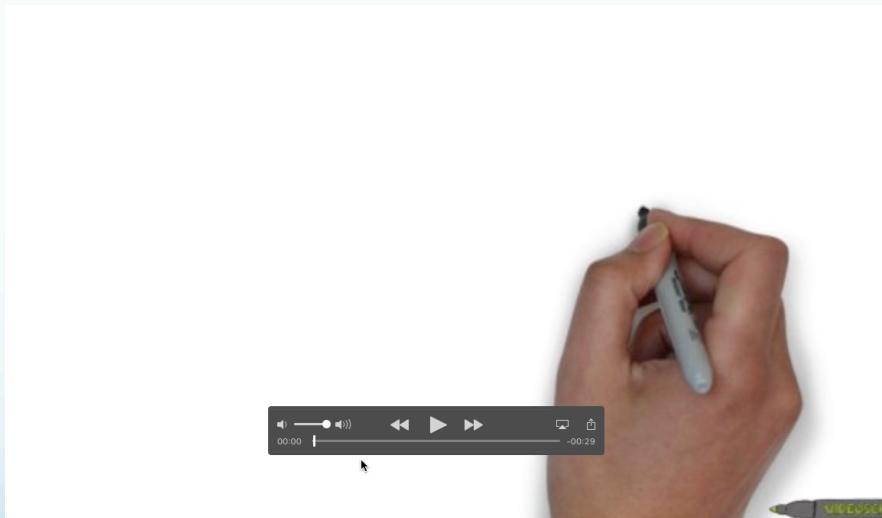
Some type : “HA” Some “HV” and some just “ H”
if you Google Ethiopic U+1200 you get this :

●

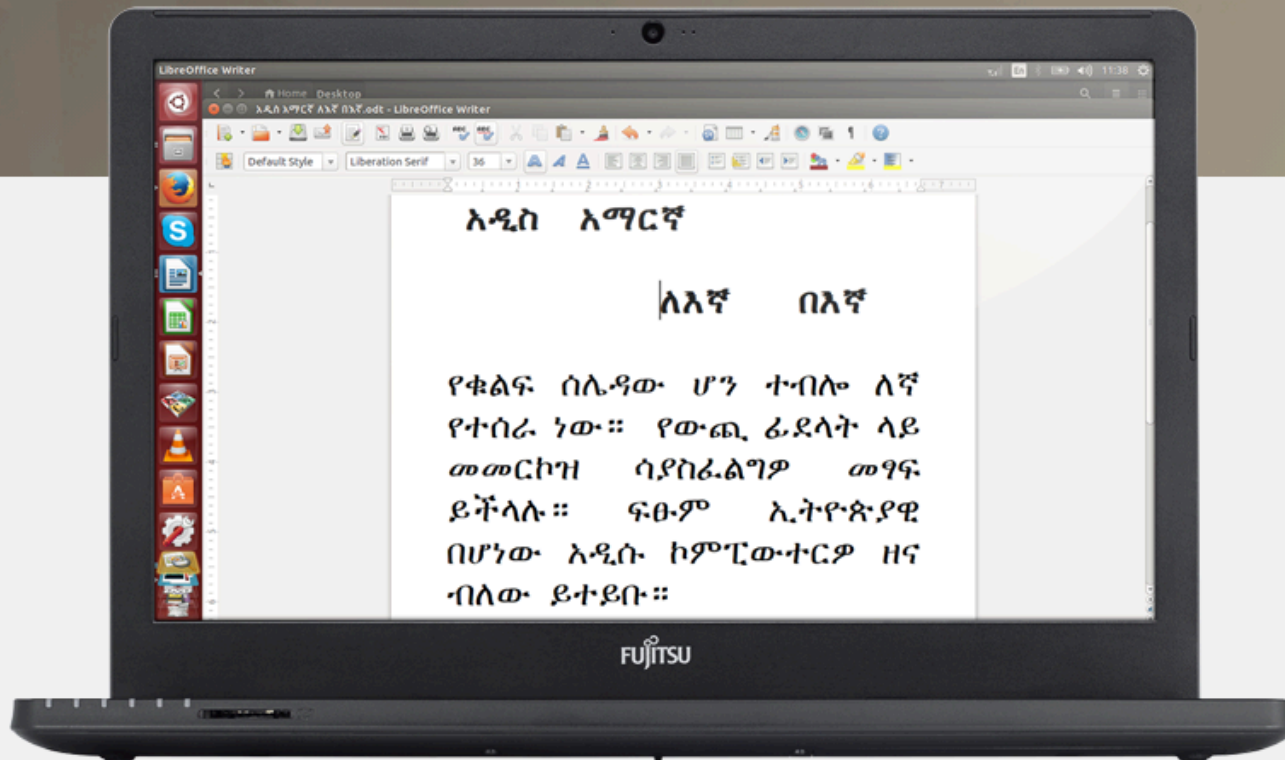
Ethiopic							
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1202	1212	1222	1232	1242	1252	1262	1272



- <http://www.flamingtext.com/Animated-Logos?text=%E1%8D%8D%E1%88%A5%E1%88%93>



የመጀመሪያውን በግእዝ ፊደል የሚፅፍ ላፕቶፕ በመጠቀም በራስዎ ቋንቋ



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- **The Future is Bright for Ethiopic & Amharic**
 - Google Amharic **Translate** has desktop as well as mobile versions
 - Google Chrome now translates any **Website** into Amharic in few seconds
 - There are several AMHARIC/ETHIOPIC **OCR's** (Optical Character recognition) Digital image processing
 - There are several Amharic **Speech Recognition** software
 - etc

Final words

- Digital Ethiopic has arrived and here to stay !
- It is **EASY** to install and use (minutes)
- It is **FREE** (99%)
 - If you purchase Ethiopic apps be careful
- Provide inputs to developers of Ethiopic App developers
 - Mostly young college age Ethiopians & Eritreans
- For Tutorials and historical archives visit:

