Using Myanmar Language in GIS Datasets

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Before

• Have been Using the Non-Unicode Standard to type Myanmar in GIS Shapefile 
  – E.g. WinInnnwa, WinResearcher Font series

  – Weakness/Limitation
  – Viewable in Myanmar in the Layout but Not able to type in Myanmar Script (only the Roman character)
  – Not able to display the tables at the same time with map
Before

Was using Roman Character to store Fonts and using special non-unicode Fonts to display Myanmar Character.
Trouble Shooting the Reason

• Problem is
  – The shapefile was not in UNICODE Standard
  – The Software doesn’t support Myanmar Language
  – Different OS versions – Window Versions
    • Window7 (ZawGyi-One) - ဗနာစ်မှန်စေ
    • Window 8.1 (Myanmar3) - ဗနာစ်မှန်စေ
Find the Way to Embed Myanmar Script

• Convert all GIS shapefile format to UNICODE Standard.

• Type in Myanmar Unicode Keyboard
  – Myanmar3, ZawGyiOne keyboard

• Use Unicode Fonts to display/view the font
  – E.g. Myanmar3, Pyidaungsu, Padauk, etc.
Converting to Unicode format can be done easily in QGIS.
Available File Storage Formats

To store the UNICODE or Myanmar Scripts

• **Solution - 1 : Available File based Format**
  – Unicode Standard shapefile, etc.

• **Solution - 2 : Available Database Format**
  – ArcGIS
    • Personal GeoDatabase
    • File GeoDatabase
  – PostGIS Database
  – mySQL Spatial Database
  – Oracle Spatial Database

Now you can Type Myanmar Fonts in GIS files!
Demo on Desktop Environments

• **ArcGIS with Myanmar Fonts**
  – Using GIS *Unicode shapefiles* for Myanmar
  – Using *Personal GeoDatabase* to store Myanmar
  – Using *File GeoDatabase* to store Myanmar

• **QGIS**
  – Using GIS shapefiles for Myanmar
  – Using GIS Database for Myanmar
ZawGyi-One shapefiles in ArcGIS

- OS: Window 7 Professional
- ArcGIS, All datasets, Fonts: ZawGyi-One
Unicode shapefiles in ArcGIS

- OS: Window 8 Professional, Unicode
Using Myanmar Scripts in Web GIS Mapping

• Web Application – GeoServer

• ZawGyi-One Fonts rendering
  – OK, but not UNICODE

• UNICODE Fonts rendering
  – Unicode standard, but not OK yet
Unicode Fonts Rendering

- Table OK
- Fonts rendering in Graphic – **NOT OK.**

ZawGyi-One Fonts Rendering

• Table OK

• Fonts rendering in Graphic – OK.

Thank you very much for your kind attention!