

The Internet Radio Linking Project



Presented by **VE7LTD**

IRLP System Designer

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Topics of Discussion

- Introduction to Google Earth Overlays
- What is KML?
- Parsing the IRLP Status Page Database
- Setting up the IRLP Overlay
- Challenges
- Improving the system

Introduction to Google Earth Overlays

- Allows others to write code to enhance GE.
- Overlays images, lines, placemarks, routes, etc. onto a GE image.
- Can direct a fly-over of particular areas – Often seen on the news.
- Based on a public language called Keyhole Markup Language (KML).

What is KML

- <http://earth.google.com/kml/>
- KML = keyhole markup language (Keyhole owned GE before Google bought its rights).
- Simple and easy to interpret language.
- Poor error reporting – It works or it doesn't – No good tools to test a KML file
- KMZ is zipped KML (for reducing bandwidth requirements)
- Allows browsers to direct refresh intervals, text on the control frames.

Parsing the IRLP Status Page

- All done by a script on the irlp.net server
 - Downloads the nohtmlstatus.txt file from status page.
 - Parses the txt file into a table.
 - Pulls lat/long, node number, extra info, connection details.
- Lat/long converted into proper format
- Connections are detected, and lines are drawn between nodes that are connected.
- Colours are defined depending on status of node, and type of connection.
- File is first saved as KML, then zipped as a KMZ file for distribution.

Setting up the IRLP Overlay

1) Install Google Earth

<http://earth.google.com>

2) Browse to IRLP Overlay setup file

<http://www.irlp.net/setup-irlp.kml>

3) Sit back and enjoy!

Challenges

- The KMZ file is large – 78 kb
http://www.irlp.net/usage/usage_200603.html#TOPURLS
- Currently need to update all information to keep color of nodes current.
- Distribution is difficult due to restrictions on HTTP and KML – Cant only send the delta!
- People who can not set their lat/long setup correctly! **MUST** be in decimal degrees!

Improving the System

- 1) Reducing the size of the KMZ file
 - Split into 2 KML files – one for links, one for nodes
 - Lose colour coding of nodes
 - Reduce frequently updated info 20-30 fold
- 2) Designing a DELTA system
 - Only changes will be sent
 - Reduce bandwidth requirements
 - Increase the speed of the updates
- 3) Suggestions?

Questions?

- Any questions?