Democratising QGIS *- and handy tips*

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FunGIS FOSS4G 2020, JCU Ideas Lab

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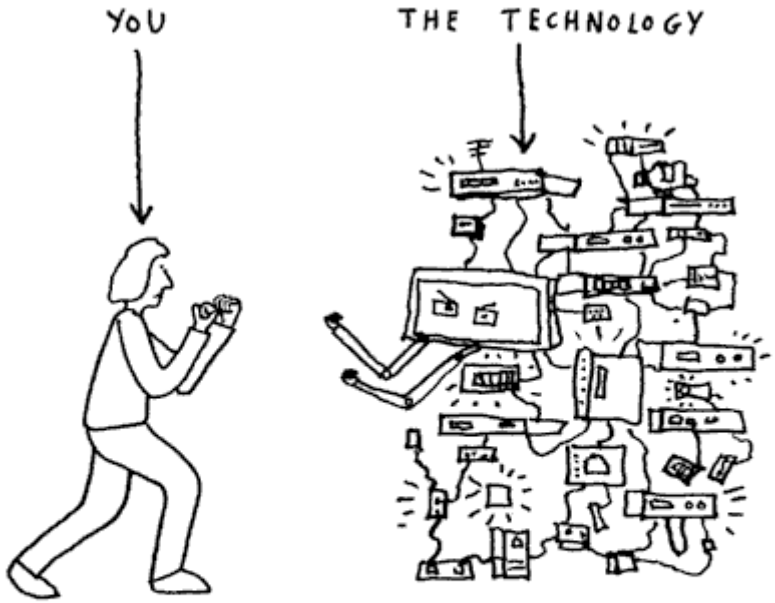
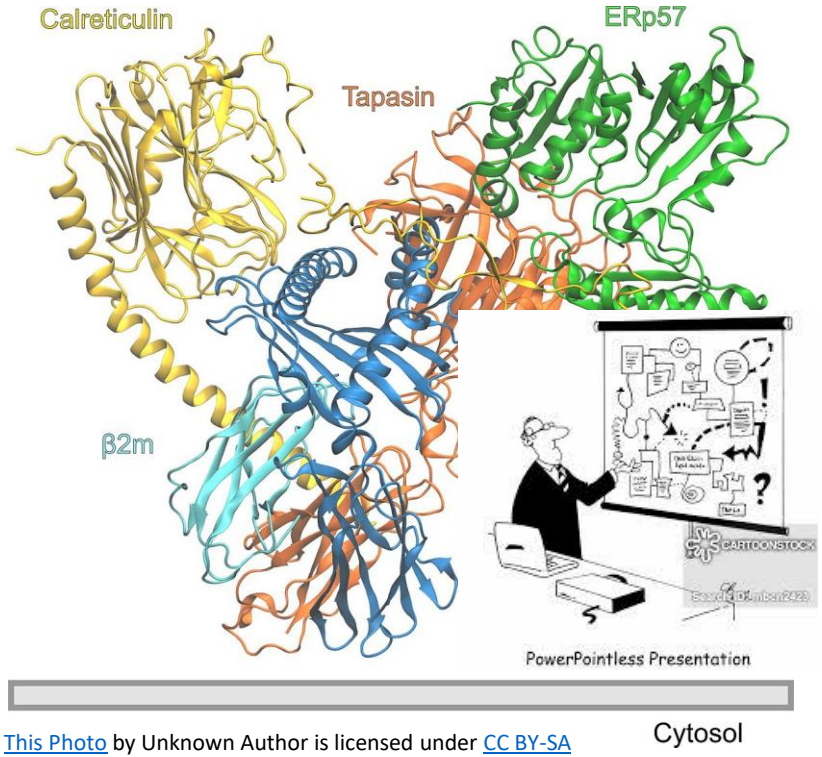
Geospatial Services and Products



THE BATTLE WE ALL FACE

weblogcartoons.com

For End Users - non-GIS/non-technical individuals…



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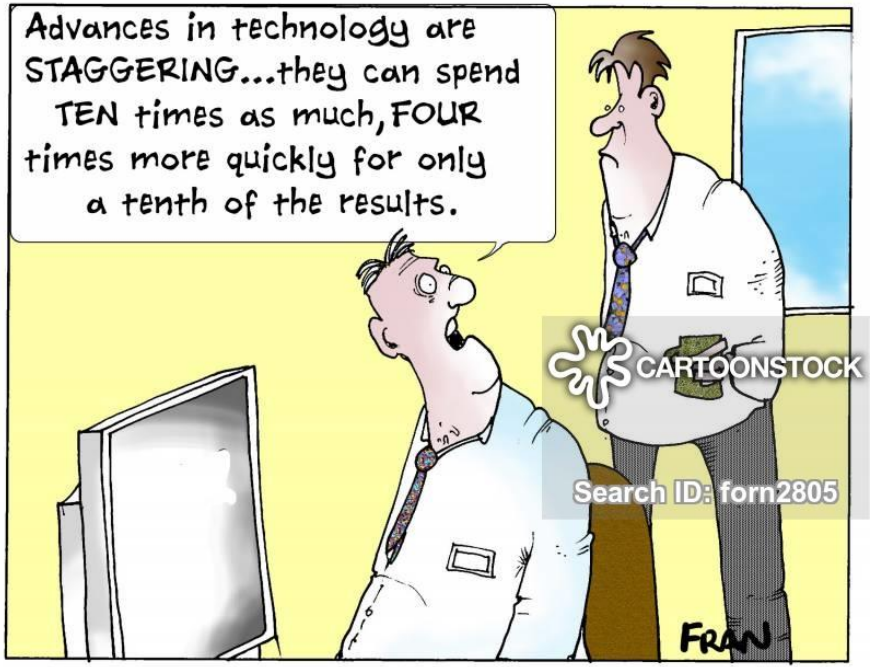
Do they find it…

- Too complicated?
- Simplified tasks?
- SQL without knowing SQL?

For administrators…



The questions we must ask are…

- No/Low Code?
- content management system?
- mobile devices, off-line and online?
- non-technical and technical?

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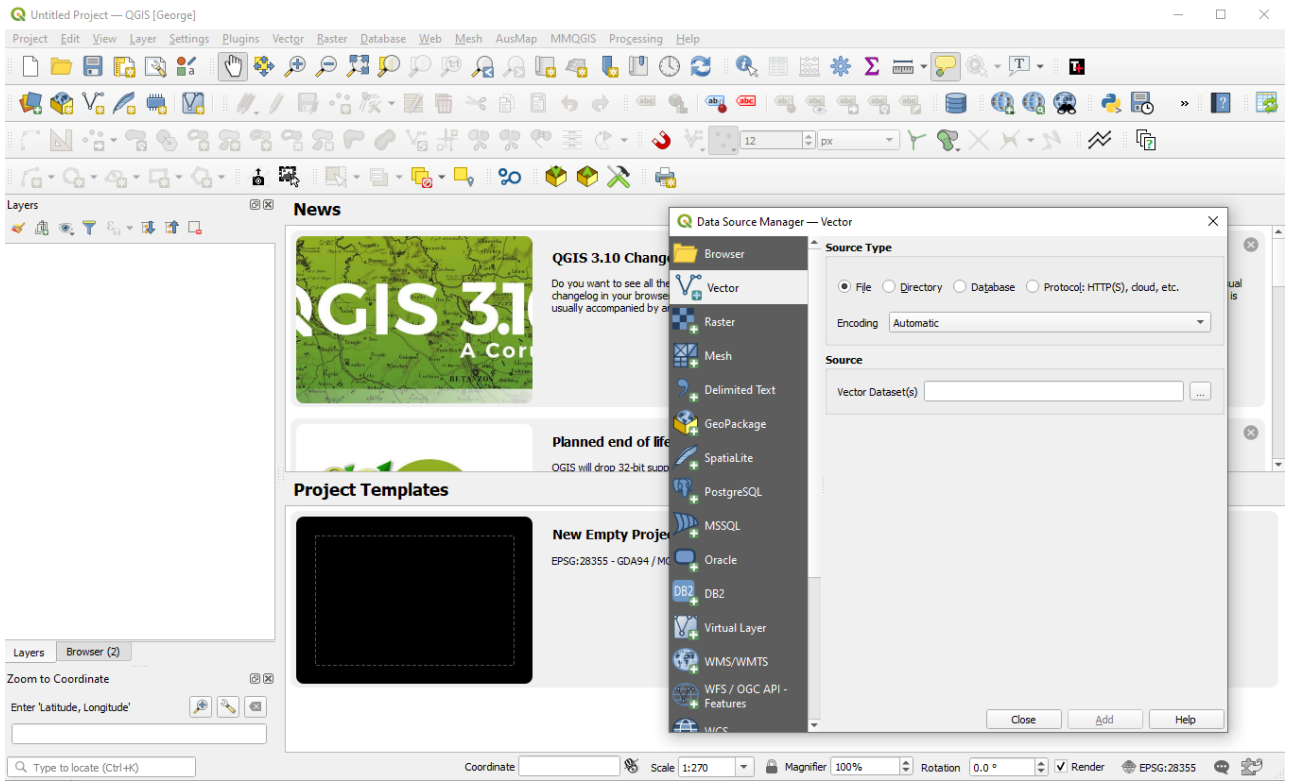
Standard – For Naive End Users

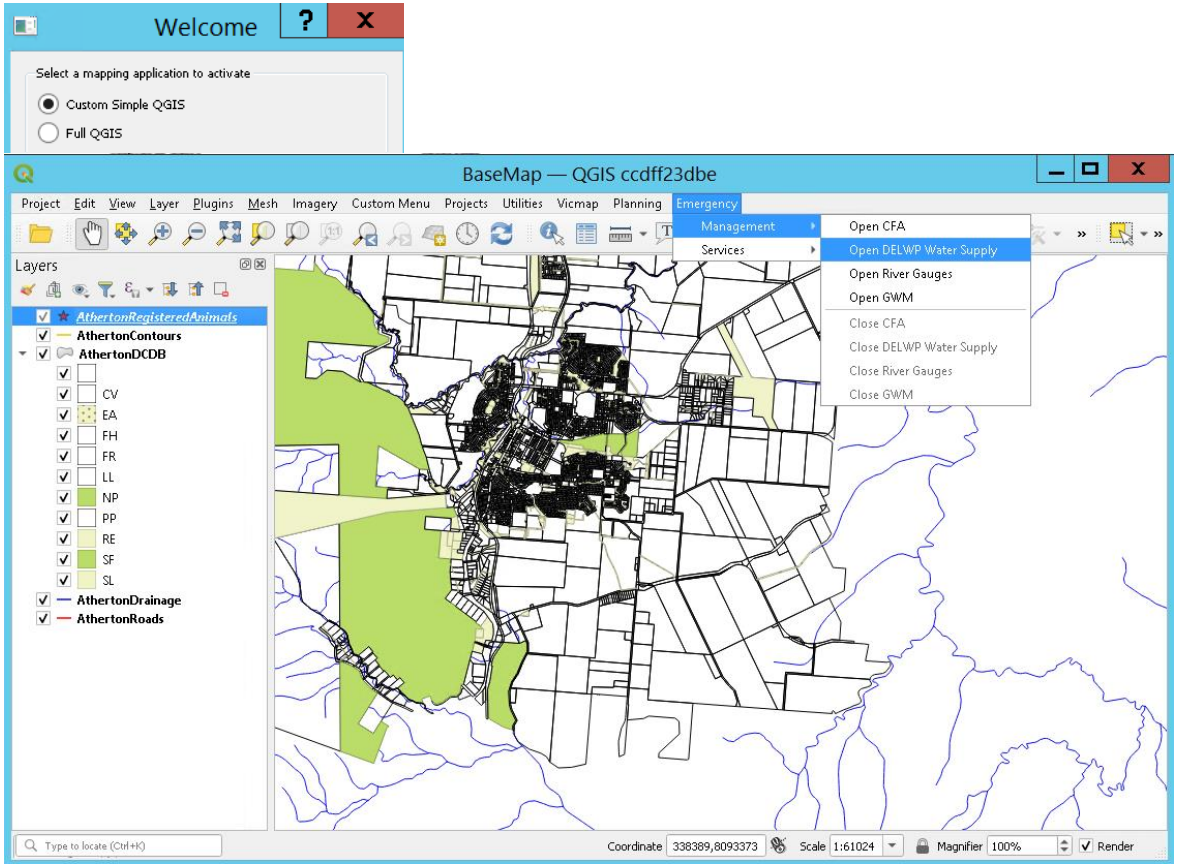


Is it…

- Complex?
- Many options?
- Many steps?
- Functional and adaptive?

This is not significantly different in commercial GIS software

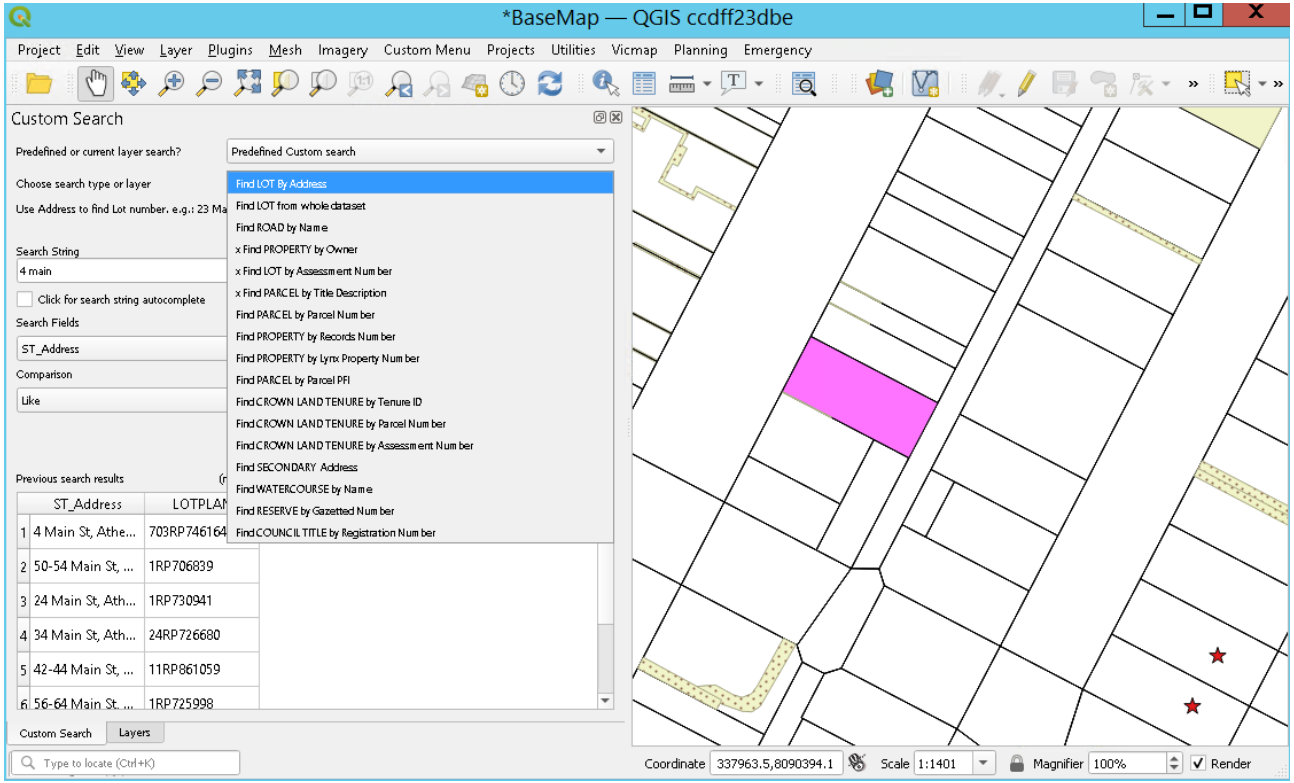
Custom QGIS



- Simple choice of experience
- Load a standard map
- Add menus for Imagery, Projects, Assets etc that load groups of layers
- Simplify closing opened layers

This is also available in MapInfo through our custom code base.

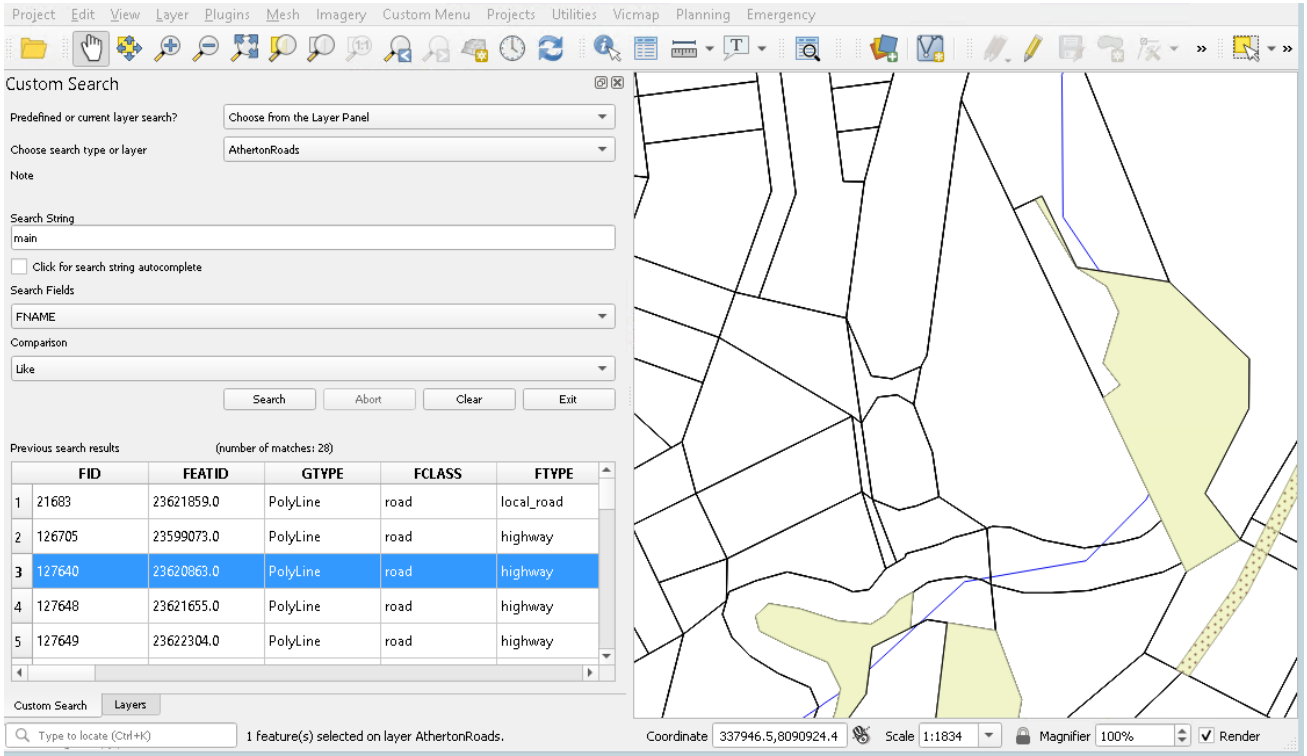
Custom Search



- Choose predefined searches with results tailored to your needs.
- Use autocomplete to start searching
- Customise the search further if required setting the fields to inquire in and the comparison
- Click on a result to zoom into the feature
- Spatial (within, intersect) searches are being added

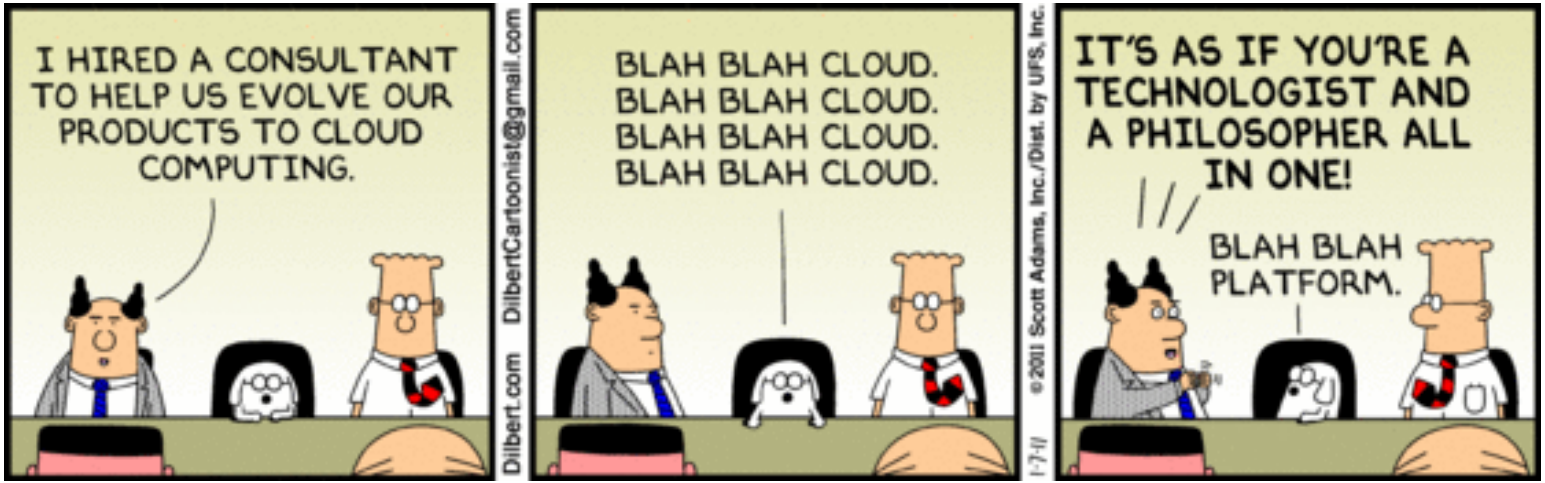
Similar functionality is available in Mapinfo through our custom code base.

Search Layers



- The open source plugin allows intuitive but powerful search options

Administration



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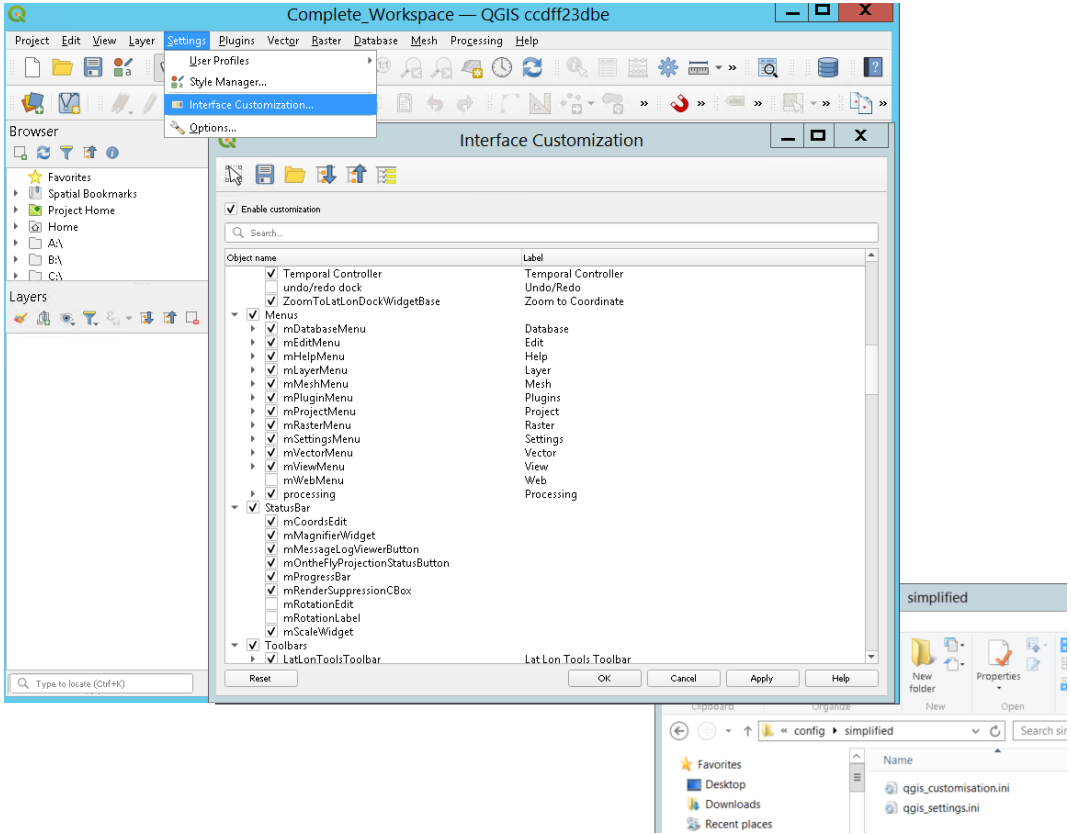
Change the UX



- Admins use the QGIS interface customization tool to save the required config into a custom folder

- Our system will then use this every time a user opens the custom simplified (or full) interface.

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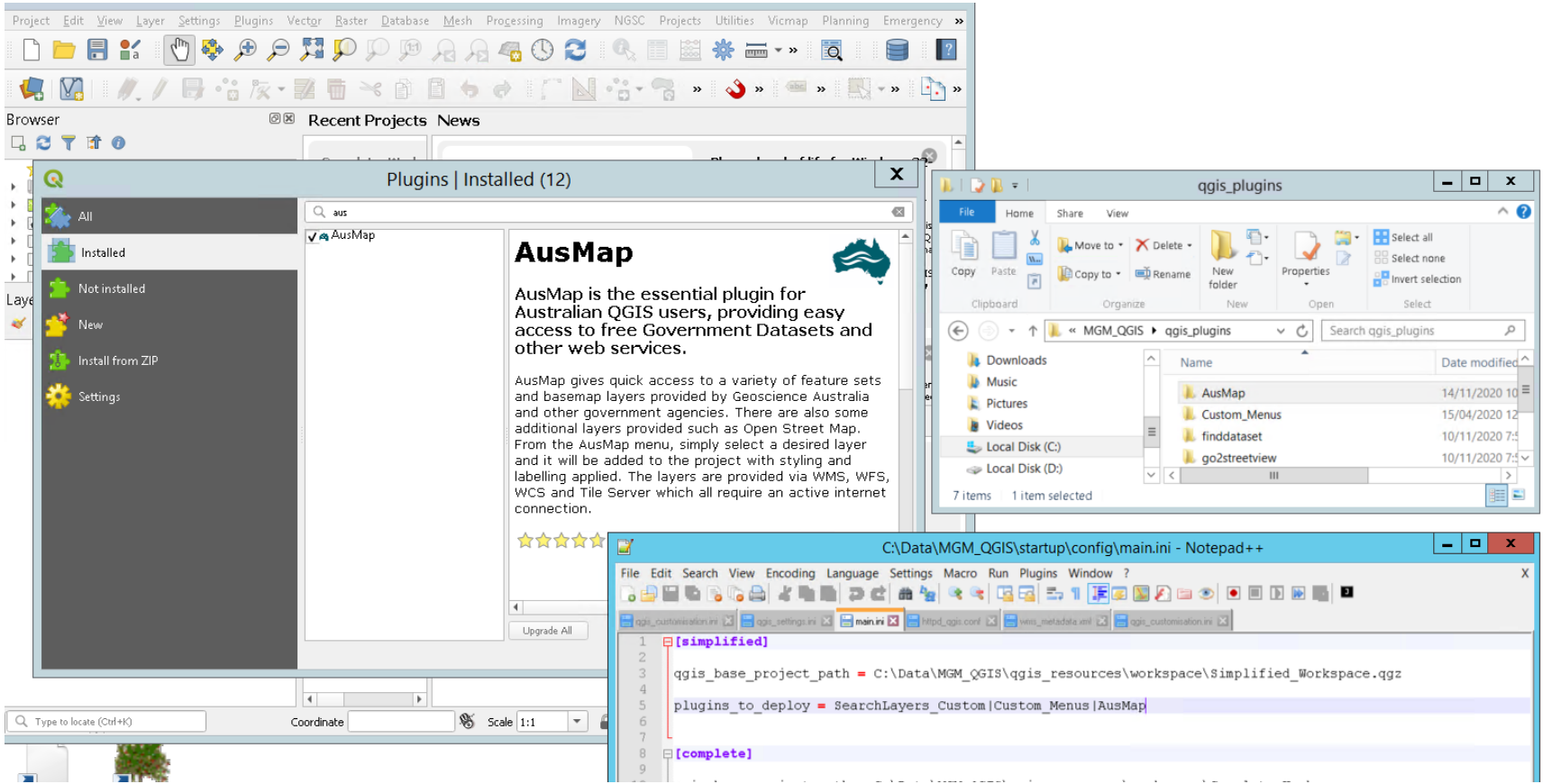
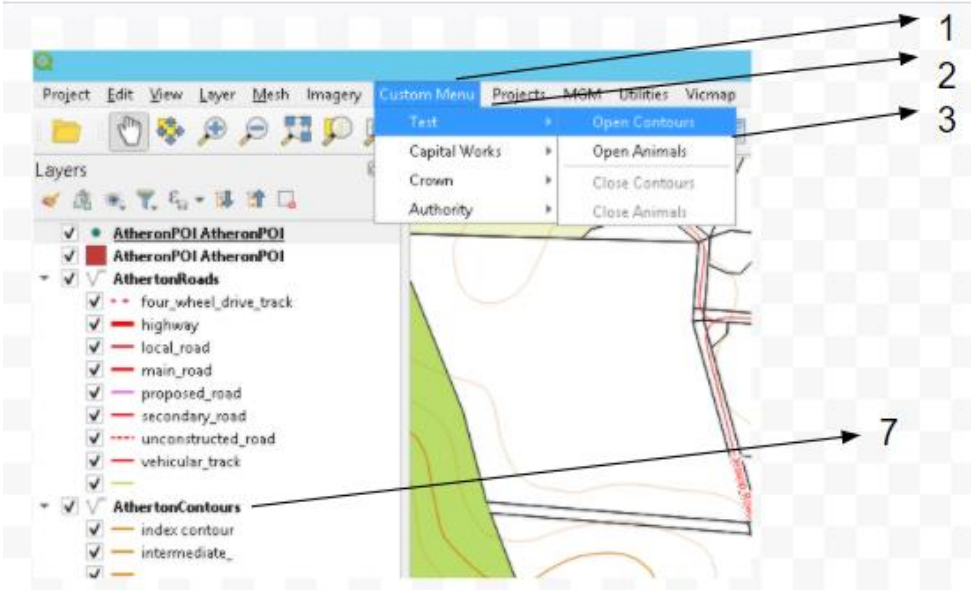
Install Plugins



Add / Modify Menu items



Field 1 = **Custom Menu**
Field 2 = **Test**
Field 3 = **Contours**
Field 4 = **\\PROD\GIS\Data**
Field 5 = **Contours.shp**
Field 6 = **Contours.qml**
Field 7 = **Contours**
Field 8 = (blank) –for database views
Field 9 = (blank) –for Web Services
Field 10 = **ogr**

In the configuration file, each line represents a menu item, in a 10-fields comma-separated distribution, as exemplified below:

Custom Menu,Test,Contours,\\GIS\Data,contours.shp,contours.qml,Contours,,,ogr

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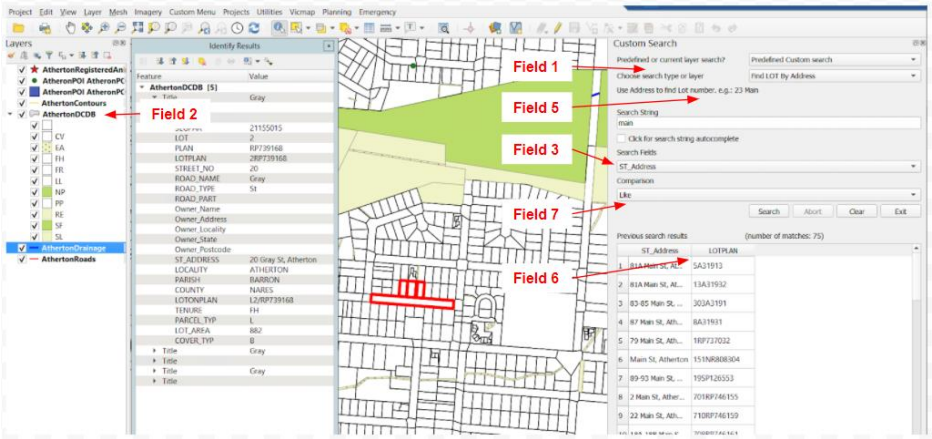
Add / Modify Menu items

Field Name	Description	Mandatory Field
Field 1	Name of the first level menu item	YES
Field 2	Name of the second level menu item	YES
Field 3	Name of the third level menu item	YES
Field 4	System full path of the directory where the target GIS dataset is saved	YES
Field 5	Name of the target GIS dataset (a file name). This can be any vector dataset (ShapeFile, TAB file etc.) or any raster dataset (ERS/ECW, GeoTIFF etc.)	YES
Field 6	A QGIS styling file (QML file) to be applied to the target GIS dataset when loaded as a QGIS layer. The QML file has to exist in the same directory declared in Field 4. Leave field blank if no custom styling is required for the layer.	NO
Field 7	Name used for the layer holding the target GIS dataset	YES
Field 8	Reserved field. Leave it blank. This will hold queries and database table views	NO
Field 9	Reserved field. Leave it blank. This will hold server info for WMS/WCS layers	NO
Field 10	QGIS layer type. Use “ogr” for vector layers and “gdal” for raster layers	YES

A third level menu can be configured to load more than one GIS dataset layer in QGIS.
In that case, fields 1, 2 and 3 will repeat. Fields 4, 5, 6, 7 and 10 will hold different values.

Custom Search



Field 1 = **Find Lot by Address**
Field 2 = **AthertonDCDB**
Field 3 = **ST_Address**
Field 4 = **Cadastre\AthertonDCDB.tab**
Field 5 = **Use any Road Name. e.g Main**
Field 6 = **ST_Address^^LOTPLAN**
Field 7 = **Like**

In the configuration file, each line represents a pre-configured search option, in a 7-fields comma-separated distribution, as exemplified below:

Find LOT By Address,Parcel,ST_Address, Cadastre\AthertonDCDB.TAB,Use Address to find Lot number. e.g.: 23 Main,ST_Address^^LOTPLAN,Like

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Custom Search

Field Name	Description	Mandatory Field
Field 1	Name of the predefined search option	YES
Field 2	Name used for the layer holding the target GIS dataset	YES
Field 3	The name of the attribute in the target GIS dataset in which the search will be executed	YES
Field 4	System full path of the file representing the target GIS dataset. This dataset will also be loaded as a QGIS layer. It should reference a vector dataset (ShapeFile, TAB file etc)	YES
Field 5	Predefined search option description. Ideally, this field should contain a short note highlighting specific usage recommendations for the selected search option	YES
Field 6	List containing all attribute names from the target GIS dataset that will be displayed in the search results table. When displaying more than one attribute, please use "^^" between the names in the list. When left blank, only the attribute in field 3 will be displayed in the search results table	NO
Field 7	The default comparison operator used in the search option. Allowed values are "Like", "Equals" and "Starts With"	YES

Additional Functionality - *Currently being tested and planned.*

1.Ability to set the zoom level per search result
2.Icon displaying timing of result especially for large datasets.
3.Full SQL search with geometry

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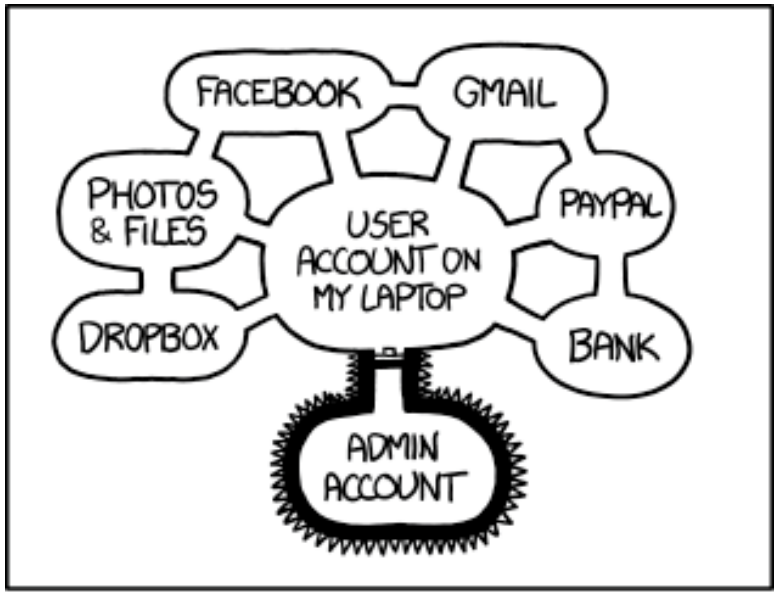
Permissions and Security



IF SOMEONE STEALS MY LAPTOP WHILE I'M LOGGED IN, THEY CAN READ MY EMAIL, TAKE MY MONEY, AND IMPERSONATE ME TO MY FRIENDS,

BUT AT LEAST THEY CAN'T INSTALL DRIVERS WITHOUT MY PERMISSION.

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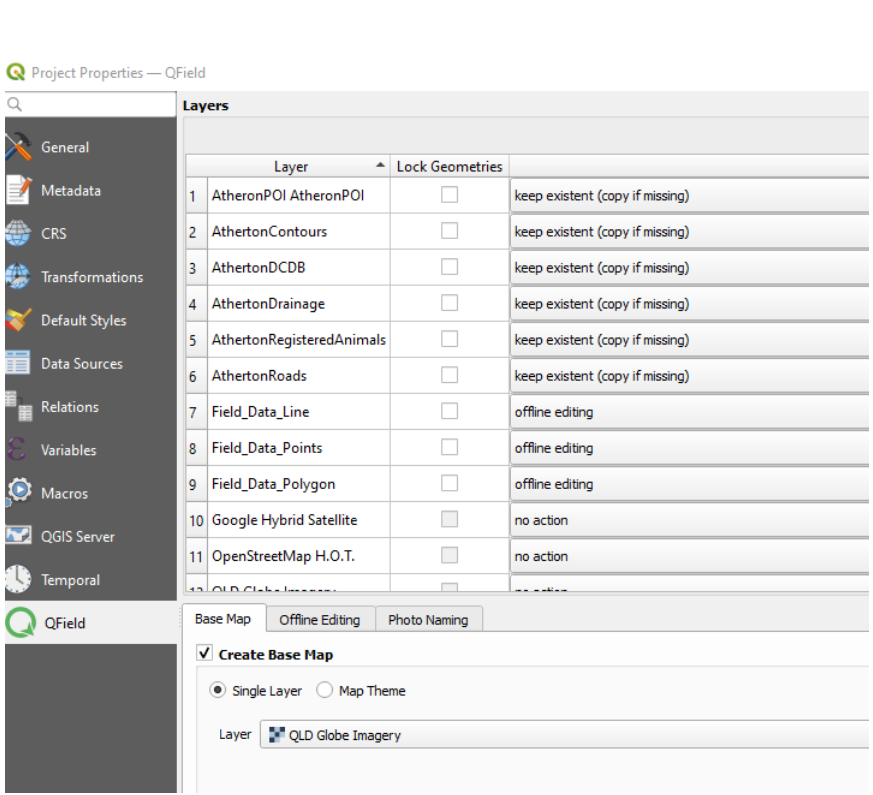
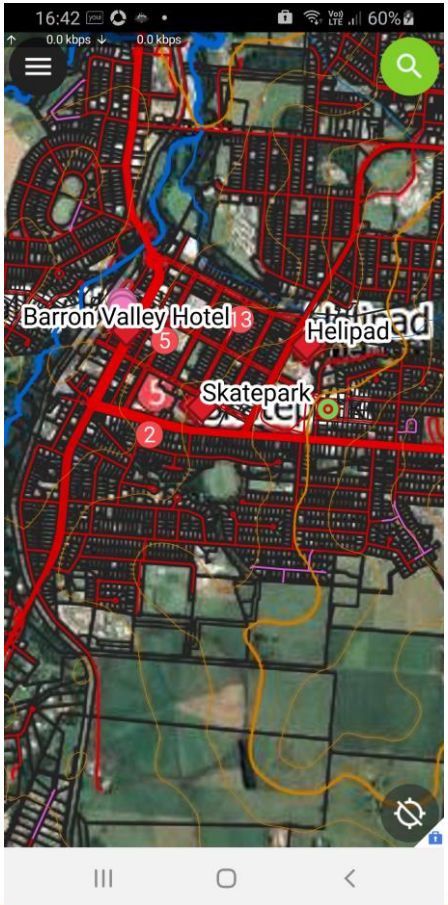
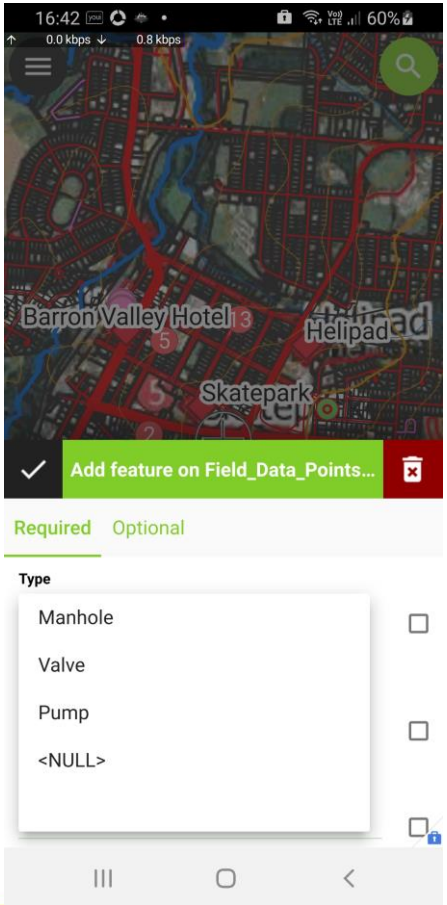
How does it work in a mobile environment?


Project Properties — QField
Layers
General
Metadata
CRS
Transformations
Default Styles
Data Sources
Relations
Variables
Macros
QGIS Server
Temporal
QField
Layer
Lock Geometries
1 AtheronPOI AtheronPOI keep existent (copy if missing)
2 AthertonContours keep existent (copy if missing)
3 AthertonDCDB keep existent (copy if missing)
4 AthertonDrainage keep existent (copy if missing)
5 AthertonRegisteredAnimals keep existent (copy if missing)
6 AthertonRoads keep existent (copy if missing)
7 Field_Data_Line offline editing
8 Field_Data_Points offline editing
9 Field_Data_Polygon offline editing
10 Google Hybrid Satellite no action
11 OpenStreetMap H.O.T. no action
Base Map
Offline Editing
Photo Naming
Create Base Map
Single Layer
Map Theme
Layer
QLD Globe Imagery


16:42
60%
0.0 kbps
0.0 kbps
Barron Valley Hotel
Helipad
Skatepark


16:42
60%
0.0 kbps
0.8 kbps
Barron Valley Hotel
Helipad
Skatepark
Add feature on Field_Data_Points...
Required
Optional
Type
Manhole
Valve
Pump
<NULL>

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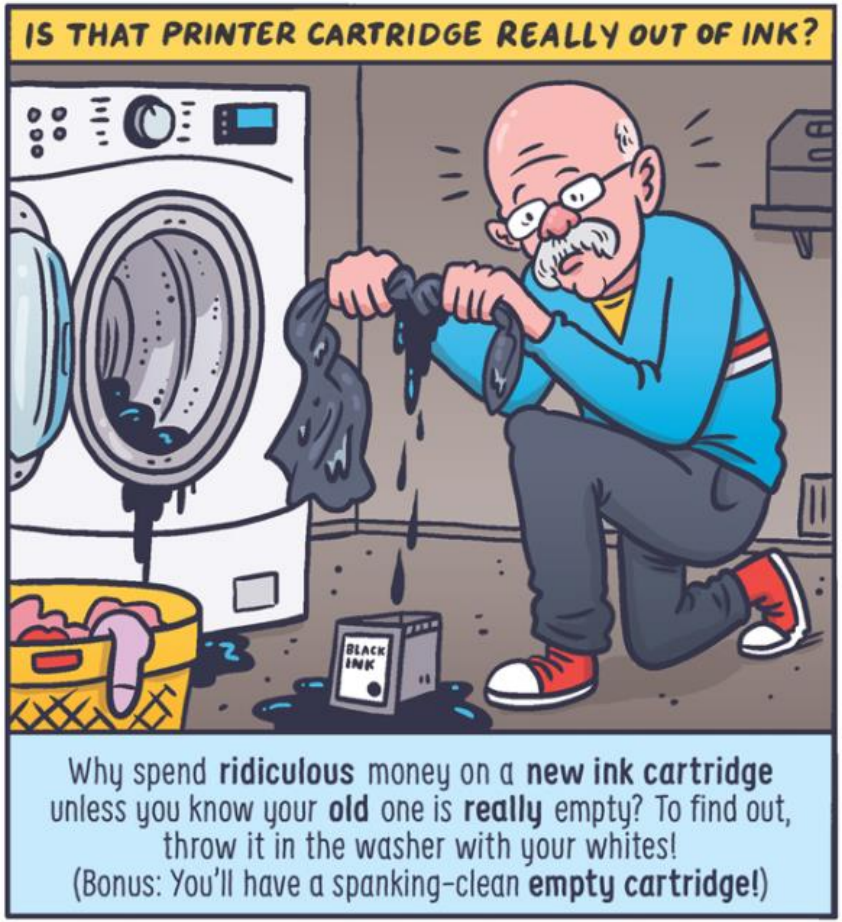
Handy Tips



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