First Steps: Use

Summer holidays will soon be looming and you want to make the most of your two weeks off work. **Andy Channelle** gets his computer on the case...

Anticipation is the sibling of hope, but can also be the daddy of disappointment. This is especially true when it comes to holidays; we're seduced by glossy brochures, well-honed sales patter and the expectation that any time away will remove us enough from 'reality' to give us a break from our mundane lives. Unfortunately, it doesn't always work out that way, but a Linux box can help us plan routes, excursions and many other aspects of our break, and make the actual experience of going away a little less stressful. In this tutorial we'll use Google Maps to plan out everything to do with a holiday jaunt, then transfer the data to *Google Earth* for more manipulation. We'll also look at ways to add data to this project, post-holiday, to create a capsule of the event for sharing with friends and family.

All of the tools we'll be highlighting are free to use and often just require you to register for the appropriate service or, in the case of *Google Earth*, download and install the Linux binary. While we've opted for a Google-biased selection here, much of this project could be accomplished using a similar range of tools from Yahoo (Yahoo Maps, Flickr) and even Microsoft's Live offerings; our choice has largely been based on the availability of *Google Earth* and *Picasa* (Google's image management software) for Linux, which makes the latter part of the project possible.

Our expert

Andy Channelle
Andy has been taking his first steps in Linux software for the past six years and has been interested in technology since the advent of the Dragon 32.

Part 1 Google Maps

To kick off, browse to **http://maps.google.co.uk**. To make the most of this service you're going to need a Google account, so either log in with an existing one or hit the Create Account button to make one. This service is free and, as it's completely web-based, all the information you add will be accessible from any net-enabled computer. At its most basic, you can use this service without an account – just input a postcode, map coordinate or location in the search box to see maps and satellite imagery of that location. For more, an account is essential.

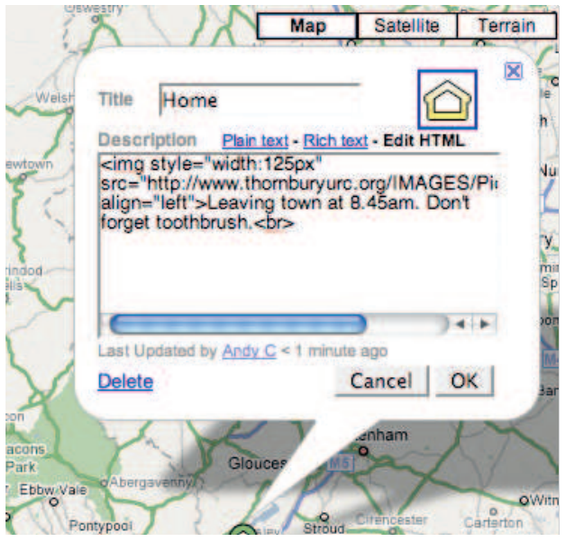
The Maps interface is very simple: the main work area is on the right, with a few tools ranged along the top-right, while a selection area is on the left of the screen. Once you've logged into your account, this section on the left should have two tabs at the top labelled Search Results and My Maps: the latter will be further sub-divided into Featured Content and maps created by you. We're going to work in the My Maps section to start with.

Hit the Create New Map link on the right and supply an appropriate name, and optionally a description, for this map. Underneath this information is a pair of radio buttons, which define whether the rest of the world can see your efforts. As the wider world is probably not interested in your holiday plans, we'll keep things private by selecting the Unlisted option and then hitting Save. We have a few tasks we want to accomplish, so we'll start by adding our two base locations: home and holiday. Begin by entering your postcode into the search box to centre Maps on your house. More refined navigation is accomplished by clicking and dragging to move the centre of the map or – to zoom in and out – by using the scrollwheel on your mouse. You can also use the icons on the left of the main window. To put a placemarker on your house, click on the Placemark icon (second left on the top-left

› **You can create maps for a variety of purposes and corral them into this section of the Google Maps website.**

» **Last month** We found out how to save time with templates in *OpenOffice.org*.

digital maps



› The Edit HTML button means you can create very rich points of interest for your own maps.

edge of the main window) and then move your mouse to the appropriate location and click. This will drop the placemarker and open up a labelling window. In here, you can add a description of the location or any other information relating to that point. Your text can be plain or 'rich', meaning it's possible to add images, hyperlinks and almost anything HTML is capable of displaying.

There's no facility to upload images to Maps, so either add an image to an online service such as Flickr, upload one to your personal web space or find one to link to on the internet. When you've found an image, copy its address by right-clicking on it in *Firefox* and selecting Copy Image Location, then paste it into the address bar that appears when you click the Image icon in Maps.

The picture will appear in its native resolution and, if this is too big for the space available, the size can be edited by clicking the Edit HTML link in the window and changing the value labelled Width to something more suitable. When you only adjust this number, the picture will retain its original aspect ratio. Another simple edit worth doing here is adding the following text just after the URL of the image (but outside the URL's quote marks): **align="left"**. This will push the picture to the left of the space and enable the text to run around it in a more tidy fashion.

You can add a link to a word or image by selecting it with the mouse and clicking the Link icon, then adding a web address to link to. As with the image above, there are further options available for configuring links if you know a little HTML. For example, it's possible to make a link open in a new browser window by adding a target value in the Edit HTML section:

```
<a href="http://www.mytown.org" target="_blank">My Town</a>
```

The code above would insert a link to the website named and, when the link was clicked, would open it in a new window. It's also possible to define the icon that will represent the point on your map. Click the generic icon at the top-right of the window to open up a selection of available icons, and if none of these feel suitable, click the Add An Icon link and use the dialog box to link a new one from somewhere on the web such as Flickr, Photobucket or Picasa. The software can manage JPEG, PNG or GIF format, and any images larger than 64x64 pixels will be scaled down.

Once you've created this location, hit the Done button and then do the same for your destination. It's likely that the destination box will grow as the holiday draws near and you find more stuff to add, so if you're using a picture, stick to a small image to start with.

When you've finished, click the Done button to write everything back to the server. Your icons will remain visible on the map (unless you've clicked the radio button next to the map's name) and clicking on them will bring up an information box containing the data you've added. These locations are also noted on the left-hand pane of the user interface, so it's possible to select locations without them being on the exposed part of the map.

As well as placemarks, we can also add lines to the maps and, handily, get a distance reading. Here's an example: say you want to work out whether it's quicker to walk from your holiday home to the nearest beach on the road or via the coastal path. Using the Line tool (third icon from the left) you can create a line by clicking the start of the route and then clicking control points at various locations, following the path of the road. As more points are added, a distance readout appears in the tooltip accompanying the Line tool. When you hit the beach, double-click to finish drawing and then click the line once more to begin adding a label. These labels can contain the same kind of information as a placemark.

Dynamic and imported data

Now we have these two locations defined, we're going to add some dynamic data – information that's updated constantly from a different source. We have two 'data layers' that we're going to add, but rather than putting these on top of the locations we've already defined, we want them to function as completely separate maps. The reason for this is that the kind of information these layers contain – weather and traffic reports – will be useful as the holiday gets closer, but will just clutter up the map in the intervening time. The first of these, the weather, is very simple. Just scroll down the list of available content and select the map »

› The final result is a map that contains a lot of bespoke information, as well as other useful stuff added automatically, such as bus timetables.

Quick tip

See how the night sky will look from your holiday home in *Google Earth*. View > Switch to Sky.

» labelled The Weather Channel. The map will re-centre on the US, but if you click on one of the locations added earlier, it will spin back to the UK and you should see weather icons dotting the map, including the temperature and current conditions.

The second element is a little more complex but, again, the hard work has been done for us, this time by the BBC's Backstage project. To get this working, you need to select Create A New Map from the left-hand pane and choose Import from the options just below the list of user maps. The information will come into Maps using GeoRSS feeds, which, as the name suggests, are location specific. The URL you need to enter will be like this:

```
http://maps.google.co.uk/maps?q=http://bbc.blueghost.co.uk/trafficGeoRss.php?location=locationname.
```

The last part, **locationname**, should be the name of the location you're interested in viewing – a list of available locations is available from **http://bbc.blueghost.co.uk/travel_data/locations.rss**. For our project we'll enter the location name **cornwall** and then hit the Done button. We'll now have two distinct user-generated maps under the Created By Me section and one switched on from the Featured Content section.

Finally, we'll add some information about the destination to build up a comprehensive picture of events and venues available near the holiday home. This begins with a normal Maps search, so select Find Businesses at the top of the window and input two search strings. The first should be the kind of business you're looking for (we'll start with pubs) and the second is the location itself, so input the postcode of the holiday home. This produces about eight results within just a few miles, but we're just going to add the two nearest establishments to our map. Add a result to your map by clicking on it and selecting Save To My Maps. A new option should appear in the Placemark box with a drop-down list of available maps. Choose the appropriate map and hit Save. The result is a new placemarker on your map that can be edited and amended in the same way as any other element.

Using this method, it's possible to add all the information you're likely to need to ensure you have a restful break. And if you do it via the search method, you'll automatically have data such as phone numbers, postcodes and even reviews to hand. Having defined our locations and points of interest, we're now going to save the whole thing as a file ready to load into *Google Earth*.

Part 2 Google Earth

Once you've visited **http://earth.google.com** and downloaded the binary for Linux to an appropriate location – the system should work out that you're a Linux user and offer to download the correct version – you can get installing. The current version is 4.2, but the website should automatically serve up the latest version using a fairly generic name.

Quick tip

To make the most of your hardware, adjust *Google Earth*'s settings in Tools > Options.

The installation is going to involve a brief trip to the command line, so open up your favourite terminal/console and navigate to the correct directory. When you open a terminal it should 'be' in your home directory, so if you've saved the binary to a folder called Downloads inside your home directory, you can type **cd Downloads** and hit return to go into that directory, remembering that Linux directory names are case sensitive. If you've buried the binary somewhere else, you can use the forward slash character to go further into the system. Typing:

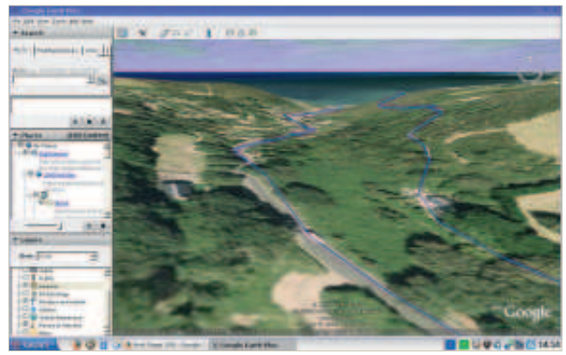
```
cd documents/Downloads/Earth
```

would take you through the **documents** and **Downloads** directories and into *Earth*. Once you're in the right place we can launch the *Google Earth* installer with the following command:

```
sh GoogleEarthLinux.bin
```

In this command string, the **sh** tells the computer that you're executing a shell script, and the second part is simply the name of the script. It almost goes without saying that, this being a Google project, you're going to need a constant connection to the internet (and a fairly good one at that) to use it properly. Once the script has executed, which took less than 30 seconds on a recent MacBook, the application will automatically launch and present a view of the world ready for a bit of exploration and the addition of your data. It will also put a shortcut into your menu system, most likely under the Internet section.

› The installer is accessed via the command line, so don't attempt to double-click the file itself.



› The terrain view tells us that the coastal path is probably a bit much for tired legs. Best stick to the road.

With *Earth* installed, go back to the browser, ensure the correct map is highlighted and then click the View In Google Earth link. This will fire up the *Google Earth* application and load the selected map into its Temporary Place space, which means it will be discarded next time you launch the application. To prevent this from happening, click the map name and drag it from Temporary Places to My Places. You can see more detail about the 'layer' – which is what this is – by clicking the disclosure (+) icons to expose the elements. Zoom in to an element by selecting it.

The great thing about using *Google Earth* for this purpose is that a lot of extra information is added automatically to your efforts. For example, the small blue dots visible on the screenshots on these pages are photos submitted to the Panoramio service (of course, you're free to add your own at **www.panoramio.com**), while the orange dots display articles of interest culled from a variety of sources, including Wikipedia, the Council for British Archeology and other organisations.

Some of the tools in *Earth* mirror those in Maps, with a few additions. It's possible to navigate around the space by dragging and mouse-wheel zooming, or by using the icons on the top-right of the main screen. One of the big advantages of *Earth* is that you can tilt the camera back to see what the terrain around a certain

› Content in *Google Earth* can help provide a good impression of where you'll be staying, including the area's history.

point looks like. This is both pretty and useful, as it's possible to get an impression of, for example, how strenuous a walk to the beach is likely to be and also a better impression of relative distances to places such as the local pub.

With the map tilted, the Pan and Zoom tools work in the same way, but now give the impression that you're flying across the landscape – which is great for visualising a journey before you get into the car.

Because *Google Earth* and Maps both use the same data format, content added to one service can be simply added to the other. This means it's possible to select the best tool for the job at hand. For example, we've found building up lines of travel and short routes is better in *Earth* because we have a better understanding of the ululating terrain, but creating longer routes and finding things to do is easier in Maps, owing to its tight integration with Google Search. Maps also provides better printed output and easier methods for integrating third-party data. Both working together should ensure you're set and ready for the best summer holiday ever. Moreover, because everything is on the internet, it's possible to share your accumulated information with other would-be holiday-makers by giving them a single URL to view in their browser.

What, no route?

The one big omission from the project so far is the route from home to destination and back again. Well, it makes sense to do this element last so that you can tailor the whole thing and avoid any foreseeable traffic jams.

On the morning of the trip, you can boot up the machine, browse to your map, switch on the Traffic Alert layer, as defined in Part 1, and then plan the route by clicking on the destination and selecting the Get Directions To Here link.

After inputting the starting point, the software should work out the quickest route between the two locations, but it's possible to adjust the route – for example, if Google attempts to take you through major roadworks – by clicking and dragging any point on the route to a new 'way point'. In this way you can also define certain locations you'd like to visit on your journey, with the software working out the most efficient route to take you to your destination. Just don't forget to print out your maps before you hit the road.

› Avoiding potential traffic jams is easier when you have up-to-date information at your fingertips.

Quick tip

Ctrl+Alt+A will launch you into the Google Earth Flight Simulator, so you can soar over your holiday destination. Next time you need it, the option will be under Tools > Enter Flight Simulator...

Part 3 Map your photos

So you've been, relaxed and returned. Now it's time to make sense of the experience and give your friends and family the opportunity to look at your holiday snaps. We're going to use the Picasa Web Albums service to upload a few photographs and then tag them with the location in which they were taken, and this can then be exported to Google Earth as a new layer of information.

If you created an account for Google Maps earlier, you'll automatically have a Picasa Web Albums account, so go to **http://picasaweb.google.co.uk** and log in. We need a home for the photos, so click the New Album button and give the album a name. Next, select the Upload Photos button and upload the photos you'd like to include. If you're using *Picasa* for Linux, you can do all of this within the application.

The images will take a while to upload, but when that's done we want to add captions to each picture in turn and then, by clicking the Add Location link, define the location of the shot (if you have a GPS-enabled camera, this might be included automatically in the picture metadata). The tool for doing this is Google Maps, and you can search by place name, postcode or road and then refine the position of the placemarker by dragging and dropping. Finally, hit Save Location to tag the picture with some geographical data.

When each photo has been tagged, navigate into the album itself and choose the View Map option. This will display a map encompassing all of your pictures, which can be zoomed and panned like any other map. But now, instead of placemarkers, the map will be littered with thumbnails of pictures associated with each location. Click a thumbnail to see the image in all its glory.

You'll also notice, in the top-left corner of the image, a pop-up link marked Play: this will cycle through your images slideshow-fashion, moving automatically around the map as it does so.

The final step is to send the entire production to *Google Earth* as we did with the planning at the beginning. Simply click the Open In Google Earth link and wait as the whole thing is loaded up. Now, in *Earth*, we can move the file – as before – into My Places then right-click the filename, select Save As and provide a location and name to save the resulting KMZ file. This file can then be emailed to friends or posted to your blog, so that anyone can download your own *Google Earth* layer to peruse at their leisure.

Every holiday has three phases: anticipation, fulfilment and memory. And, despite being a seemingly cold collection of silicon, plastic and metal, your Linux PC can play a part in each. LXF

› Review your holiday highlights with Picasa.

» Next month We uncover some of the new features in KDE 4