



Moving Data. Simply.

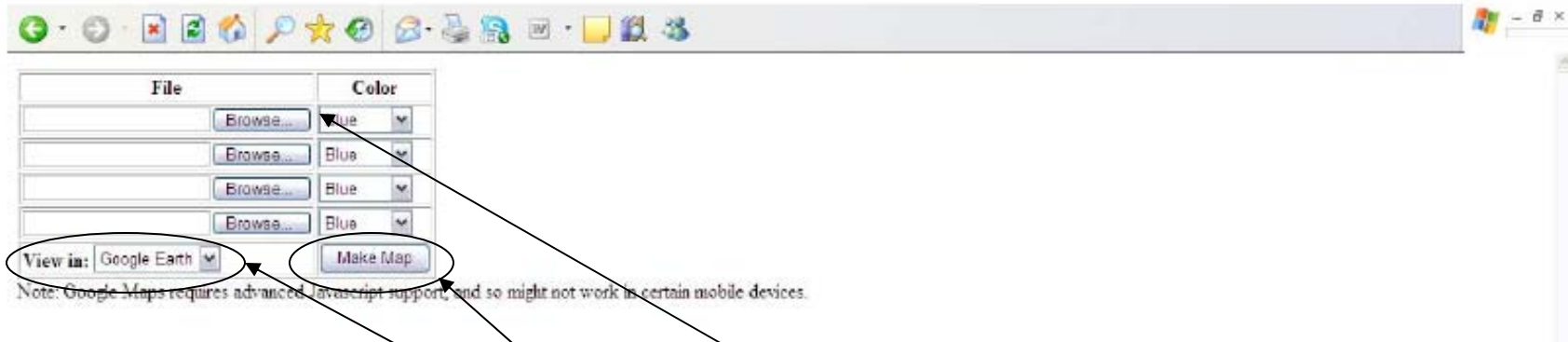
AptoGraph™ – Zoo Exhibit Locations



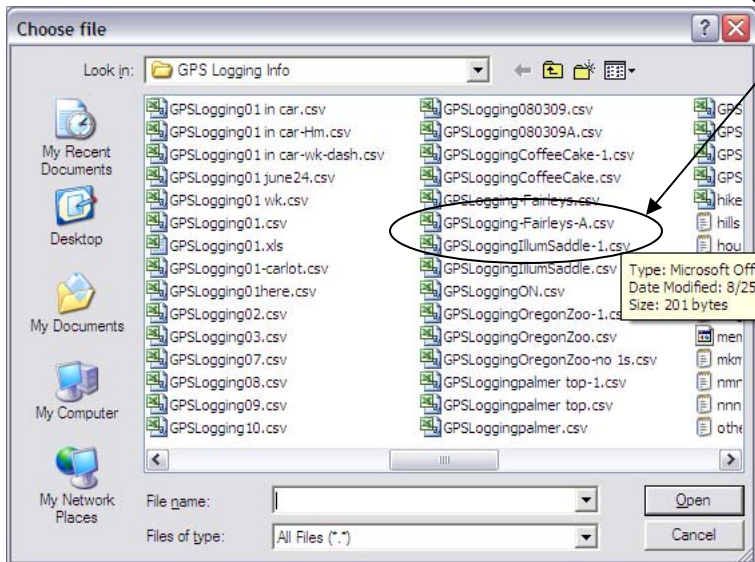
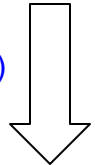
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About AptoGraph™

- AptoGraph is a web-based graphing tool that uses Google Maps and Google Earth as the back-drop to plot GPS data, thus providing a visual experience of the user's path traveled.
- AptoGraph enables users to upload up to four files in .TXT format or .CSV format and have the GPS data and adjoining "notes" plotted.
 - Examples of .TXT formatted data would be the NMEA data outputted (i.e. continuous or streaming data) while the user is:
 - Hiking
 - Riding a bike along a trail or on the road
 - Driving a route in the car or on a motorcycle, etc.
 - Example of .CSV formatted data would be point, or discrete, locations such as:
 - Store or restaurant within a city or community
 - Locations of animal exhibits at the zoo
 - Golf ball locations while playing golf on a golf course
 - Fishing or hunting spots
 - Landmarks
 - Field/crop marking, etc.
- Data can be collected in both formats by using AptoLink's DataTap SW, which runs on WinMobile OS v5 & v6, and Palm OS v4 & 5.
 - Other GPS devices on the market also provide this "data-logging" capability and their data can be graphed using AptoGraph if in the format mentioned above.

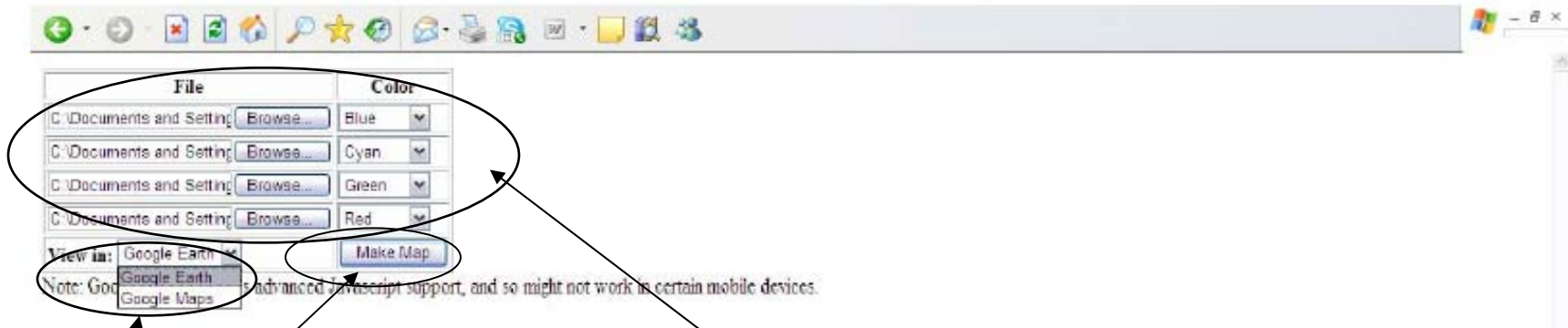


(screen opens up)



How to upload up to four files:

- Click on **Browse**
- Select one (and up to four) .TXT or .CSV files from a folder from your PC or laptop, tap on **Open**
- Select the **Color** type for the plotted data
- Select **Google Earth** or **Google Maps** output
- Tap on **Make Map**



1. Files and their colors have been chosen
2. User selects **Google Earth** or **Google Maps** for the data to be plotted against
3. Tap on **Make Map**

Google Maps

Download as KMZ

Map | **Altitude #1 (Magenta)**

Statistics of Data

Start Time Aug 25, 2009 7:11:17 PM UTC	Start Location Longitude: 122.71494 W Latitude: 45.50946 N Altitude: 196.59905 meters
End Time Aug 25, 2009 5:59:37 PM UTC	End Location Longitude: 0.00000 E Latitude: 0.00000 N Altitude: 0.00000 meters
Duration -4300 secs	Altitude Min: 175.6 meters Max: 205.2 meters Avg: 190.5 meters Min: 576.1 feet Max: 673.2 feet Avg: 625.0 feet
No speed data in this file	

Map data ©2009 Tele Atlas - Terms of Use

Portland Zoo Information

- 31 points taken – animal exhibits
- Altitude range: 576 ft to 673 ft
- UTC date and time

Google Maps

Download as KMZ

Map | **Altitude #1 (Magenta)**

Map | Satellite | Hybrid | Terrain

asian elephant - 187.6 meters altitude at 18:52:49 Aug 25, 2009 UTC

Statistics of Data

Start Time Aug 25, 2009 7:11:17 PM UTC	Start Location Longitude: 122.71494 W Latitude: 45.50946 N Altitude: 196.59905 meters
End Time Aug 25, 2009 5:59:37 PM UTC	End Location Longitude: 0.00000 E Latitude: 0.00000 N Altitude: 0.00000 meters
Duration -4300 secs	Altitude Min: 175.6 meters Max: 205.2 meters Avg: 190.5 meters Min: 576.1 feet Max: 673.2 feet Avg: 625.0 feet
No speed data in this file	

200 ft

Google Maps

Portland Zoo Information

- Click on inverted rain drop to view exhibit information entered in .CSV file

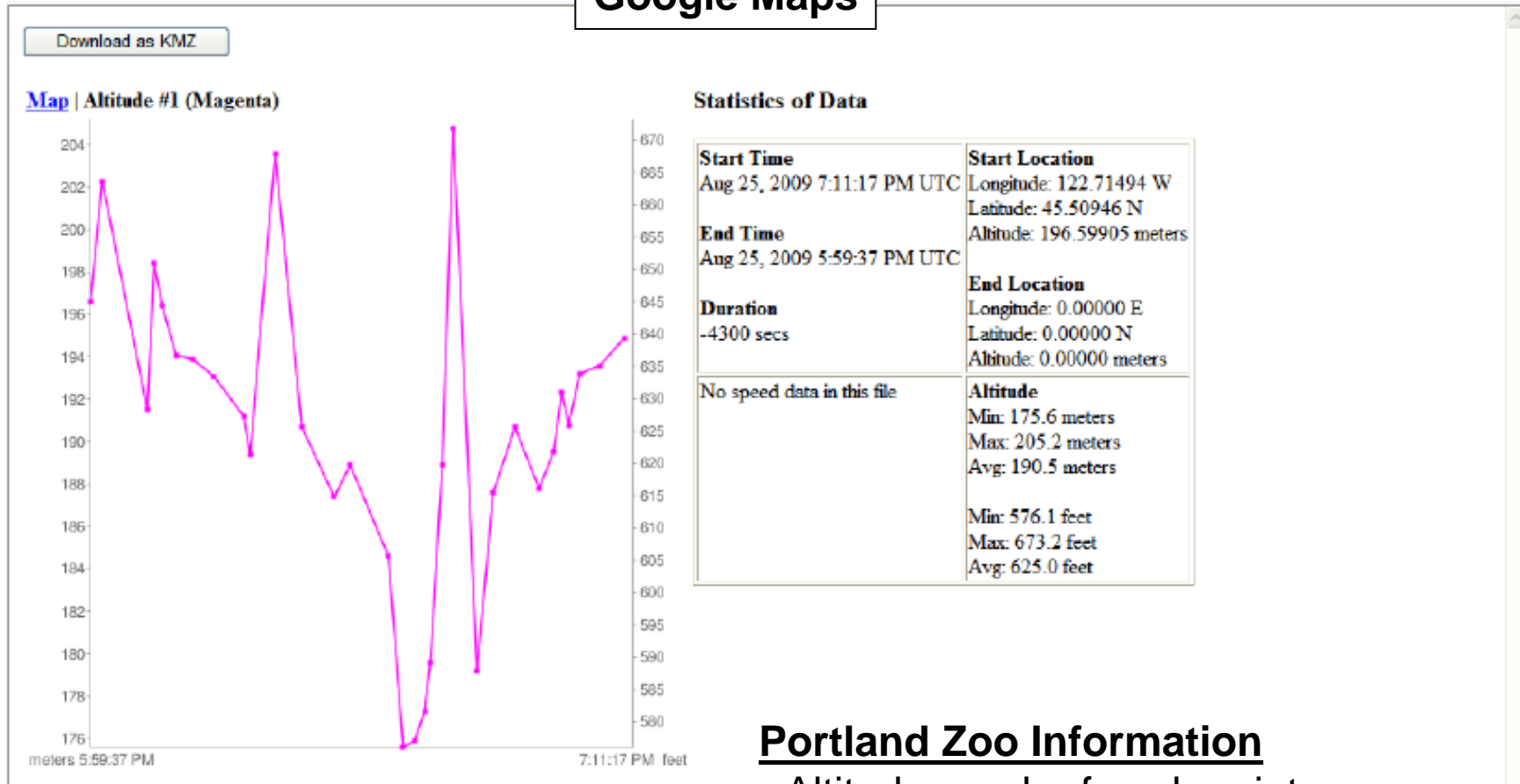


Moving Data. Simply.

.CSV for Portland Zoo

RecordNo	Latitude	Longitude	Date	Time	Altitude	Notes	ES
1	45°30.5673' N	122°42.8964' W	8/13/2009	17:59.37.000	645.01 ft	stellar cove	1
2	45°30.5618' N	122°42.9039' W	8/13/2009	18:01.11.000	663.71 ft	otters	1
3	45°30.5658' N	122°42.8795' W	8/13/2009	18:07.08.000	628.28 ft	anemonies	1
4	45°30.5651' N	122°42.8820' W	8/13/2009	18:08.01.000	650.92 ft	starfish	1
5	45°30.5670' N	122°42.8616' W	8/13/2009	18:09.07.000	644.36 ft	ice cream & snacks	1
6	45°30.5520' N	122°42.8730' W	8/13/2009	18:10.55.000	636.81 ft	penguins	1
7	45°30.5452' N	122°42.8865' W	8/13/2009	18:13.04.000	636.15 ft	insect zoo	1
8	45°30.5338' N	122°42.8970' W	8/13/2009	18:15.53.000	633.53 ft	lorikeet landing	1
9	45°30.4799' N	122°42.9472' W	8/13/2009	18:19.51.000	627.30 ft	africa entrance	1
10	45°30.4674' N	122°42.9306' W	8/13/2009	18:20.43.000	621.39 ft	rain forest bats	1
11	45°30.4565' N	122°42.9405' W	8/13/2009	18:24.02.000	667.98 ft	colobus & Allen' swamp monkeys	1
12	45°30.4393' N	122°42.9243' W	8/13/2009	18:27.33.000	625.66 ft	Bamba Du Jon Swamp	1
13	45°30.4579' N	122°42.9143' W	8/13/2009	18:31.50.000	614.83 ft	sankuru trader snacks	1
14	45°30.4664' N	122°42.9152' W	8/13/2009	18:33.56.000	619.75 ft	reticuated giraffe & speke's gazelle	1
15	45°30.4826' N	122°42.8775' W	8/13/2009	18:39.00.000	605.64 ft	zebra & gerenuks	1
16	45°30.4794' N	122°42.8622' W	8/13/2009	18:40.56.000	576.12 ft	pygmy goats	1
17	45°30.4998' N	122°42.8611' W	8/13/2009	18:42.27.000	577.10 ft	zeb & ger 2	1
18	45°30.5037' N	122°42.8304' W	8/13/2009	18:43.45.000	581.69 ft	hippos	1
19	45°30.4999' N	122°42.8171' W	8/13/2009	18:44.31.000	589.24 ft	hippos 2	1
20	45°30.5007' N	122°42.7950' W	8/13/2009	18:46.05.000	619.75 ft	bird sanctuary	1
21	45°30.5119' N	122°42.8162' W	8/13/2009	18:47.33.000	673.23 ft	rhinos	1
22	45°30.4953' N	122°42.7624' W	8/13/2009	18:50.41.000	587.93 ft	wildlife lve	1
23	45°30.5023' N	122°42.7196' W	8/13/2009	18:52.49.000	615.49 ft	asian elephant	1
24	45°30.5137' N	122°42.6786' W	8/13/2009	18:55.42.000	625.66 ft	elephant overlook	1
25	45°30.5221' N	122°42.7619' W	8/13/2009	18:58.54.000	616.14 ft	AfriCafe	1
26	45°30.5521' N	122°42.7705' W	8/13/2009	19:00.49.000	621.72 ft	babirusa	1
27	45°30.5574' N	122°42.7775' W	8/13/2009	19:01.53.000	630.91 ft	visayan warty pig	1
28	45°30.5476' N	122°42.7968' W	8/13/2009	19:02.50.000	625.98 ft	mandrill	1
29	45°30.5631' N	122°42.8159' W	8/13/2009	19:04.16.000	633.86 ft	malayan sun bear	1
30	45°30.5636' N	122°42.8413' W	8/13/2009	19:06.57.000	635.17 ft	polar bear	1
31	45°30.5688' N	122°42.8780' W	8/13/2009	19:11.17.000	639.44 ft	blue starfish	1

Google Maps



Portland Zoo Information

- Altitude graph of each point
- NOTE: May not be an important parameter or this user application

Google Maps

[Download as KMZ](#)

Map | **Altitude #1 (Magenta)**

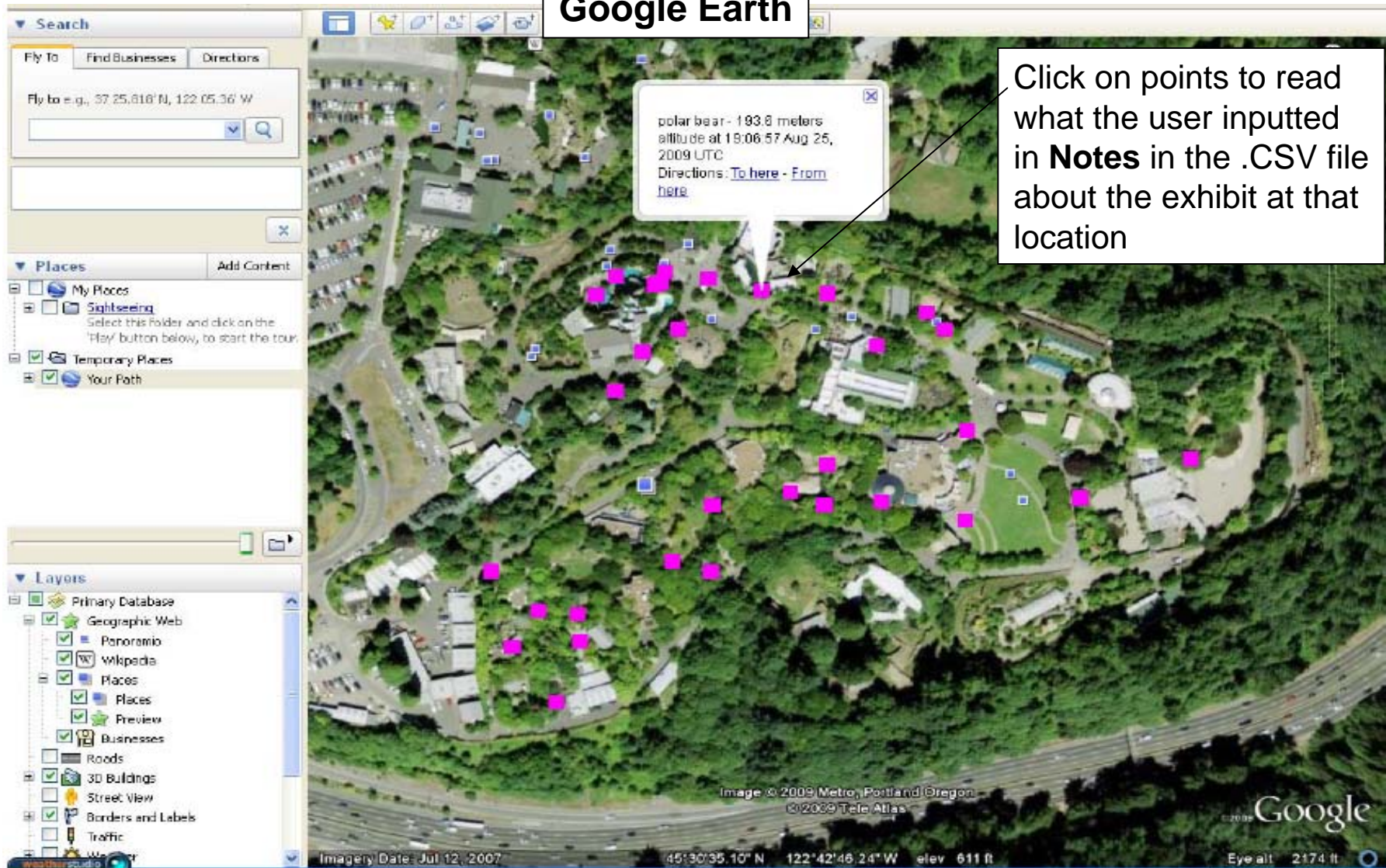
Map | Satellite | Hybrid | Terrain

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- Click on **Download as KMZ** file to obtain view in Google Earth

Google Earth



Google Earth

The screenshot shows the Google Earth desktop application. The interface includes a search bar at the top left, a 'Places' sidebar on the left, and a 'Layers' sidebar at the bottom left. The main map area displays an aerial view of a wooded area with numerous pink square markers. A popup window is open over one of these markers, displaying the following information:

elephant overlook - 190.7 meters altitude at 18:55:42 Aug 25, 2009 UTC
Directions: [To here](#) - [From here](#)

An arrow points from a text box to the popup window. The text box contains the following text:

Click on points to read what the user inputted in **Notes** in the .CSV file about the exhibit at that location

At the bottom of the map, the following coordinates and elevation are displayed: Imagery Date: Jul 12, 2007 45°30'32.60" N 122°42'38.04" W elev 614 ft. The Google logo and 'Eye alt 2174 ft' are visible in the bottom right corner.

Google Earth

The screenshot shows the Google Earth interface. On the left, there are panels for 'Search', 'Places', and 'Layers'. The 'Search' panel has a 'Fly To' section with a search box and a 'Find Businesses' button. The 'Places' panel shows a folder named 'Sichiseeing' with a description: 'Select this folder and click on the "Play" button below, to start the tour.' The 'Layers' panel is expanded, showing various layers like 'Primary Database', 'Geographic Web', 'Panorama', 'Wikipedia', 'Places', 'Businesses', 'Roads', '3D Buildings', 'Street View', 'Borders and Labels', and 'Traffic'. The main map area shows an aerial view of a campus with several pink square markers. A popup window is open over one of these markers, displaying the following information: 'zebra & perenuks - 184.6 meters altitude at 18:39:00 Aug 25, 2009 UTC Directions: [To here](#) - [From here](#)'. An arrow points from a text box to this popup. The bottom of the map shows the 'Imagery Date: Jul 12, 2007' and coordinates '45°30'32.74" N 122°42'37.37" W elev. 636 ft'. The 'Eye alt' is shown as 2191 ft.

Click on points to read what the user inputted in **Notes** in the .CSV file about the exhibit at that location

Google Earth

