Google Maps. These maps can then be viewed by other riders. On-demand wayfinding mapping allows riders to enter actual trip details (start, via and to streets) into a pre-programmed database which then suggests a suitable route based on a number of additional criteria entered by the user (type of roads, speed of travel, terrain/gradient etc).

There are a number of static cycle mapping websites. Bikely.com has a large number of Australian routes from short distance CBD based cycle commuting trips to longer training ride loops and cycle touring journeys. Static route websites offer cyclists the opportunity to share their favourite routes with others who may benefit from this information. Some systems allow for notations to be added to the route at specific locations to advise other users of difficult turnings/crossings and points of interest.
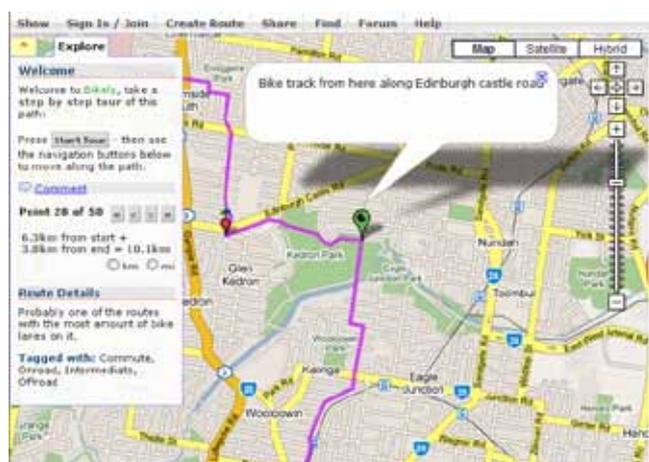
In Europe on-demand wayfinding websites are now available for cyclists in Berlin, Munich and many other cities. These sites are powered by a database of route suitability information for streets and roads within the covered area. Cyclists wanting to find a suitable cycle route enter their street of origin, an optional mid point and a destination street. Streets are selected from pull-down fields which ensure correct computer input. After selecting from additional criteria (type of roads – main, secondary, bikelanes/tracks only, no cobblestones etc) cyclists can produce a map for printing along with a turn by turn description of the recommended route. Data can be produced for use in Palm Pilots and portable Global Positioning System (GPS) devices, such as mobile phones and cycle mounted GPS units.

The Berlin system (bbbike.de) is available in an English version. The BBBike system is being developed in 30 German cities and over 50 other European and North American cities.

Making maps from GIS systems

The advent of computer-based geographical information systems has enabled council and government agencies to store information and produce this data as maps. GIS mapping is a useful tool for governments to manage developing bicycle networks as these systems are able to store a range of details on cycle facilities and signage etc. Though in recent years these systems have improved the graphical presentation of their maps, they are usually

not recommended for public use because they lack the wealth of additional information which makes a map useful to a cyclist in the community. GIS maps require additional graphical design input and can be useful to designers in the developmental phase of map making.

GPS cycle route mapping

Geographical positioning systems are becoming increasingly affordable and are now being installed into motor vehicles. Though cycle mounted GPS devices are available these systems currently lack the specific cycle route data to enable cyclists to plot their journeys based on specific bicycle route information. Cycle-based GPS devices are particularly useful for rural bicycle touring applications and, along with urban route finding, should improve in years to come as cycle route data is included in existing motoring-based systems.

Figure 12 shows output from the BBBike on-line route finding system for Berlin, Germany. This web site produces a wayfinding street list and map in printable format in response to information entered by users. The BBBike system will also download route data for use in a cycle mounted GPS device.

Figure 11 (below): Bikely is an interactive website which allows cyclists to plot favourite routes which are then available on the Internet. Bikely allows for notes to be added at points along the route to add further detail and assist navigation.

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This Cycle Note is published by
the Department of Transport and Main Roads.

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