Demo 7
Advanced data analysis with Wintrack

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Animal tracking by means of video cameras has made considerable progress over the past several years and is now being used in a large number of studies. However, the precision and frequency at which xy path data can be recorded using personal computers contrast with the relative simplicity of the analyses commonly conducted with this type of data. In order to achieve more analytical power and flexibility in numerical and graphical path analysis, we have developed Wintrack, a Windows application that processes data from a variety of commercially available tracking systems. The application provides an intuitive drag and drop interface to increase ease and speed of standard analysis and graphical representation of data. A flexible scripting language allows the advanced user to extend the capabilities of the program by defining custom arenas and specialised parameters. For example, this permits to integrate path data with events recorded through the keyboard or to adapt the program for the processing of GPS data from outdoors experiments. A macro language allows for fully automated and data base controlled large scale data analysis. We are using this feature to develop new analysis parameters for water maze and open field experiments and to evaluate them retrospectively with reference data from several thousand mice tested in our laboratory. For non commercial use, the software can be downloaded free of charge at www.dpwolfer.ch/wintrack.

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2. Steiner I, Bürgi C, Werffeli S, Dell'Omo G, Valenti P, Tröster G, Wolfer DP, Lipp HP. A GPS logger and software for analysis of homing in pigeons and small mammals. Physiol. Behav. 71:589-596, 2000