LNLS P.F. TAVARES, **Control** System, R.H.A. FARIAS, G.S. FRANCO, L.C. JAHNEL, G. MONTEIRO and J.R. PITON, LNLS, Campinas, Brazil - The control system of the LNLS Synchrotron Light Source facility is presented. The system is composed of a number of local controllers based on the Zilog Z80 CPU, which are connected through a 2 MBbs serial line (running an in-house developed communication protocol) to concentrators which provide the interface to microcomputers that are responsible for the high level user interface. The high level software is developed using objected-oriented techniques and visual design tools, whereas the low level software is mostly assembly language.