

Radio Engineering Equipment Control Using a Database Linter-VS in OS MSVS

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Abstract. According to the growth of modern computers performance, increase of random access memory and memory of disk drives, it is possible to use database management systems (DBMS) for solving the control tasks in complex systems.

The article describes the control of radio engineering complex including, for example, an antenna system, an irradiator control system, a receiver, etc. A control with the use of database tables under Linter-VS DBMS installed in OS MSVS is organized.

Each device included into the radio engineering complex and also peripheral devices are certain "entities". This entity can be represented in the database in the form of several tables. A table "commands" and table "states" must be present.

Auxiliary tables related to a particular entity can be present. It is expected that the controller, located on the side of the controllable device, controls the entity, for example — the antenna system.

It is shown that the controller communicates with a database by means of a proxy. The proxy connects a device interface with the controller and makes queries to database tables. The queries to the "commands" table are decoded into controller's commands and transmitted through the device interface. Responses are made through it, which after decoding are transferred into the "states" table.

Due to such commands and data transfer, the number of controllable and control entities is practically unlimited. They can be both local and remote.

It is stressed that DBMS controls the registration of registered users in the database. Unregistered users are not served by DBMS.

Key words: automation, radio engineering, complexes, database management system (DBMS), automated control system, GNU/Linux operating system, standard RS-485, linear algorithms