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**CREATION OF A CONCEPTUAL MODEL OF A GEOSPATIAL DATA BASE FOR COMPLEX AUTOMATION OF INFORMATION SUPPORT OF THE ACTIVITIES OF THE PATROL POLICE OF UKRAINE**

Based on the web portal architecture of GIS and modern achievements in the field of mobile communication and telecommunication technologies, the web portal «Information and Analytical Center for Road Accident Monitoring» was created, which is designed to increase the efficiency and reliability of the process of recording, registration, analysis and centralized storage of data on road accidents. The chosen object-relational database management system of the web portal allows long-term storage of information about road accidents in the database on the central server of the system and provides online access to it for users.

The database was created to provide information services to patrol police officers and participants in road traffic accidents. It includes data on road accidents (information about patrol police officers who recorded the event; participants in road accidents; vehicles; insurance companies; general information about road accidents; and photo materials) and provides the ability to receive various reports on the scene of road accidents based on the saved files.

At the initial stage of the conceptual modeling of a web portal database, it is necessary to define and describe the objects or phenomena under study, in particular, to determine the types (classes) of objects and the types and domains of their attribute values, to establish the relationships between objects and constraints. Conceptual models in modern information technology are used to implement systems with the so-called model-driven architecture, since the lifespan of a particular technical implementation is much shorter than the shelf life of the information it deals with. This necessitates the presentation of information in a way that provides for the possibility of using new methods and means of implementation without changing previously organized and stored information [1, 2].

Based on modern methodology, the relevant entities of the types of objects of the database of the web portal «Information and Analytical Center for Road Accident Monitoring» were identified, namely: patrol police officers, participants in road accidents, vehicles, general data on the scene of an accident, reports from the scene of an accident, etc. Entity attributes are the name characteristics of entities, the name of which is unique for a particular type of entity, but sometimes can be the same for different types of entities. The key attribute (key) of an entity is one or more attributes from among those that uniquely define a particular object, for example, for the entity «Patrol policeman» the key attribute is «Id\_patrol policeman», for the entity «Accident file» ‒ «Id\_Accident\_Protocol» [3].

Based on the identified entities, a conceptual scheme of the database of the web portal «Information and Analytical Center for Road Accident Monitoring» was developed and the links between them were displayed:

* one of the many patrol police officers of the Patrol Police Department can register a large number of road traffic Accidents\_Protocols;
* one or more of many road accident participants may be parties to many road accident reports; one or more of all available vehicles may be registered in many road accident reports;
* one or many of the insurance companies represented in the database may be registered in a large number of accident reports;
* the same data on the respective accident may be indicated in one accident report;
* many of all available aerial photographs of the accident scene [4] can be recorded in only one Accident\_Protocol;
* one Accident\_file contains one Accident\_protocol; one driver's license number can be held by one accident participant.

Therefore, the geospatial data base of the web portal "Information and Analytical Center for Road Accident Monitoring" was developed using UML notations, which creates conditions for automating the introduction of new information technology components during the operation of the system [5]. Thus, access to this database will facilitate the solution of insurance, legal or technical issues related to the improvement of traffic management and road infrastructure.

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