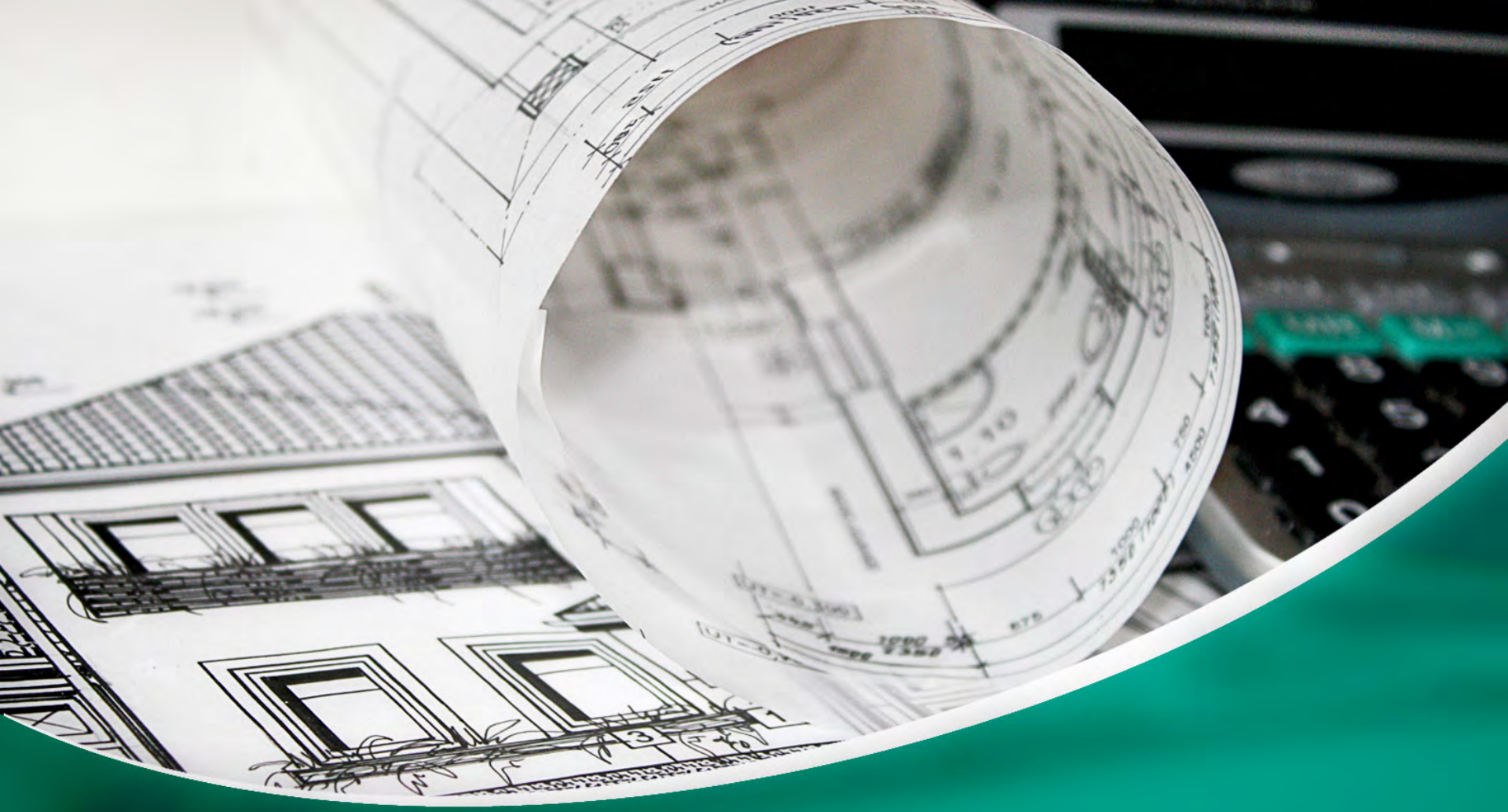

Implementation Corporate GIS in Laboratory of Information Technologies

Speaker: Ekaterina Kuznetsova

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Goals of implementing CGIS in LIT: (based on Erma software)

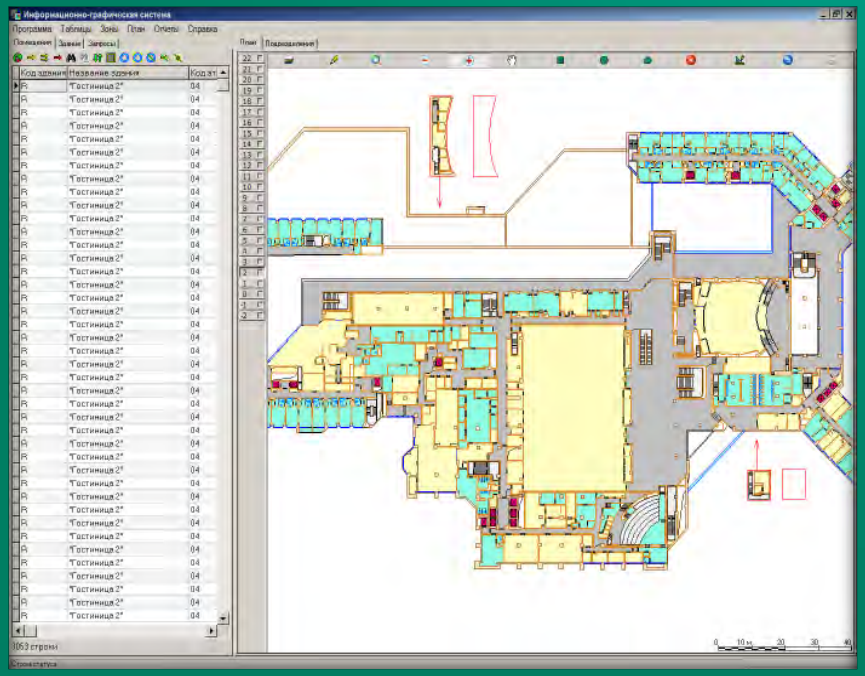
- ✓ A well-organized exploitation of the LIT building;
- ✓ Monitoring of engineering networks of the LIT building;
- ✓ Storage of archival documentation;
- ✓ And most important, creation of a common unified information space for the engineering and technical services of LIT.

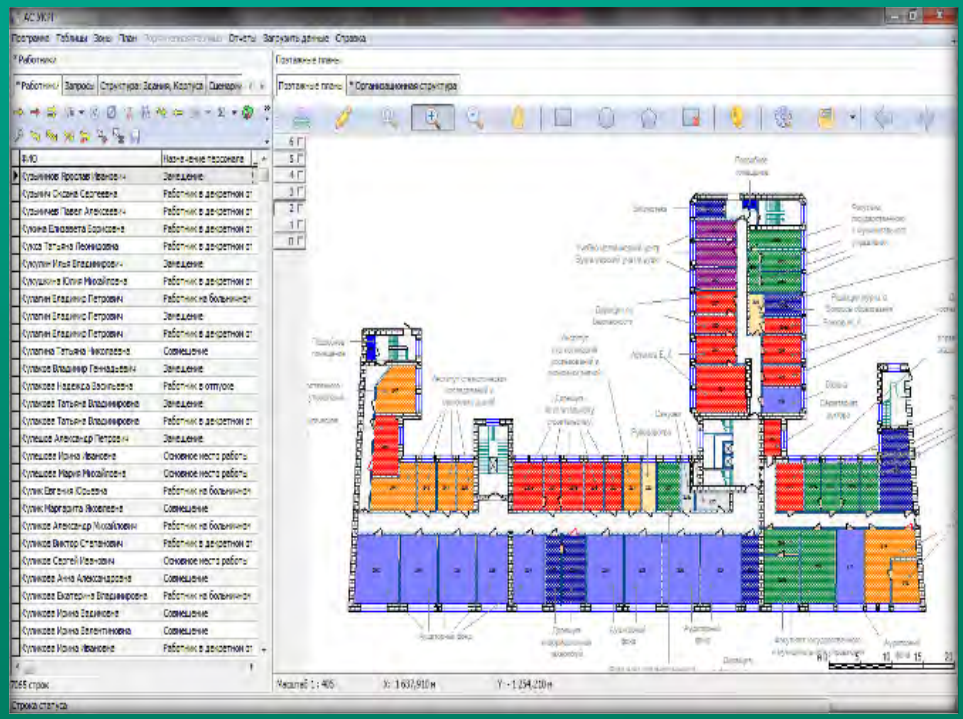
Requirements for the CGIS functionality

1. Display, input and editing of LIT floor plans;
2. Maintaining data about the building as a whole, floors, service, office and industrial premises (technical characteristics, equipment, dimensions);
3. Maintaining data on the organizational structure and employees of the enterprise;
4. Assigning premises to the divisions of the enterprise, placing employees;
5. Maintaining data on utility network objects (water supply, sewerage, electrical networks, air conditioning and ventilation equipment, heating, computer networks, fire-prevention systems, etc.) in the form of "entry / exit points", plans and diagrams of engineering systems, equipment specifications;
6. History of reconstructions and repairs of premises, engineering networks and communications;
7. Search and receipt of reference information;
8. Formation of reporting documents.

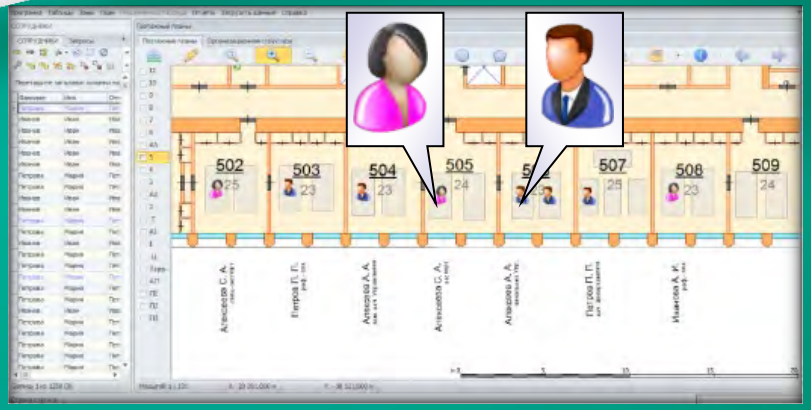
Functional blocks of CGIS

- Infrastructure of the property complex
- Maintenance management

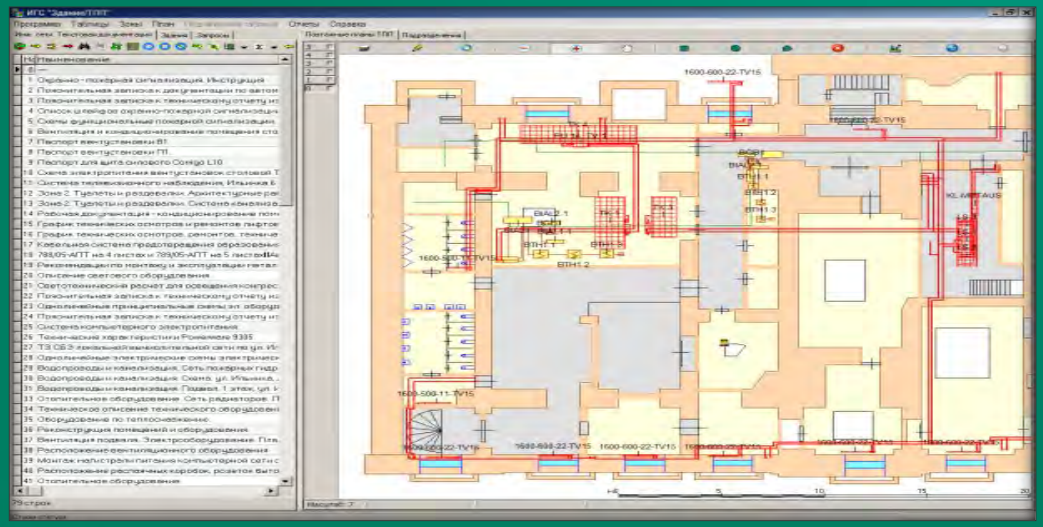




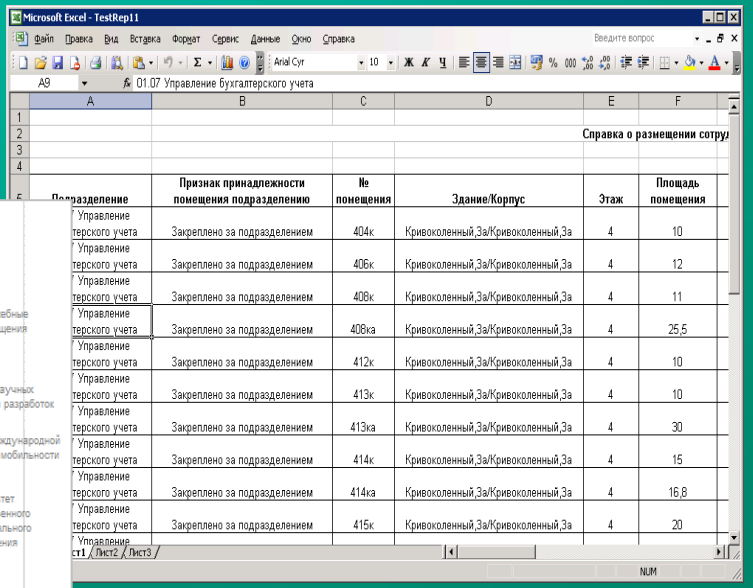
- Accommodation management

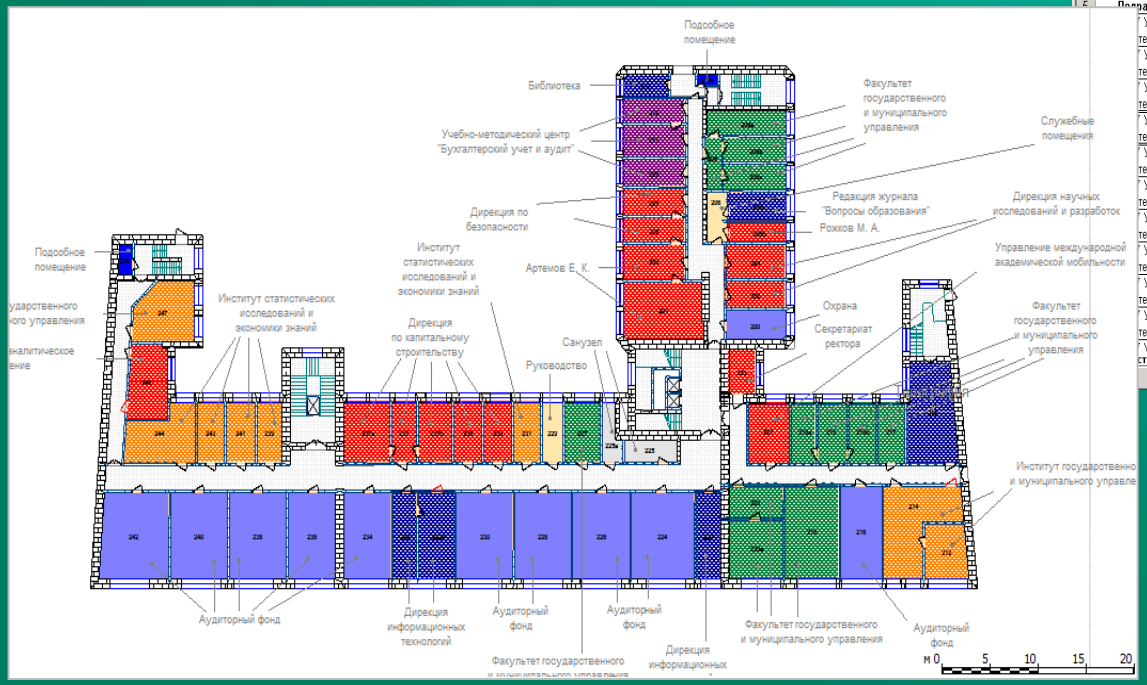


- Engineering equipment monitoring



- Archive of technical documentation

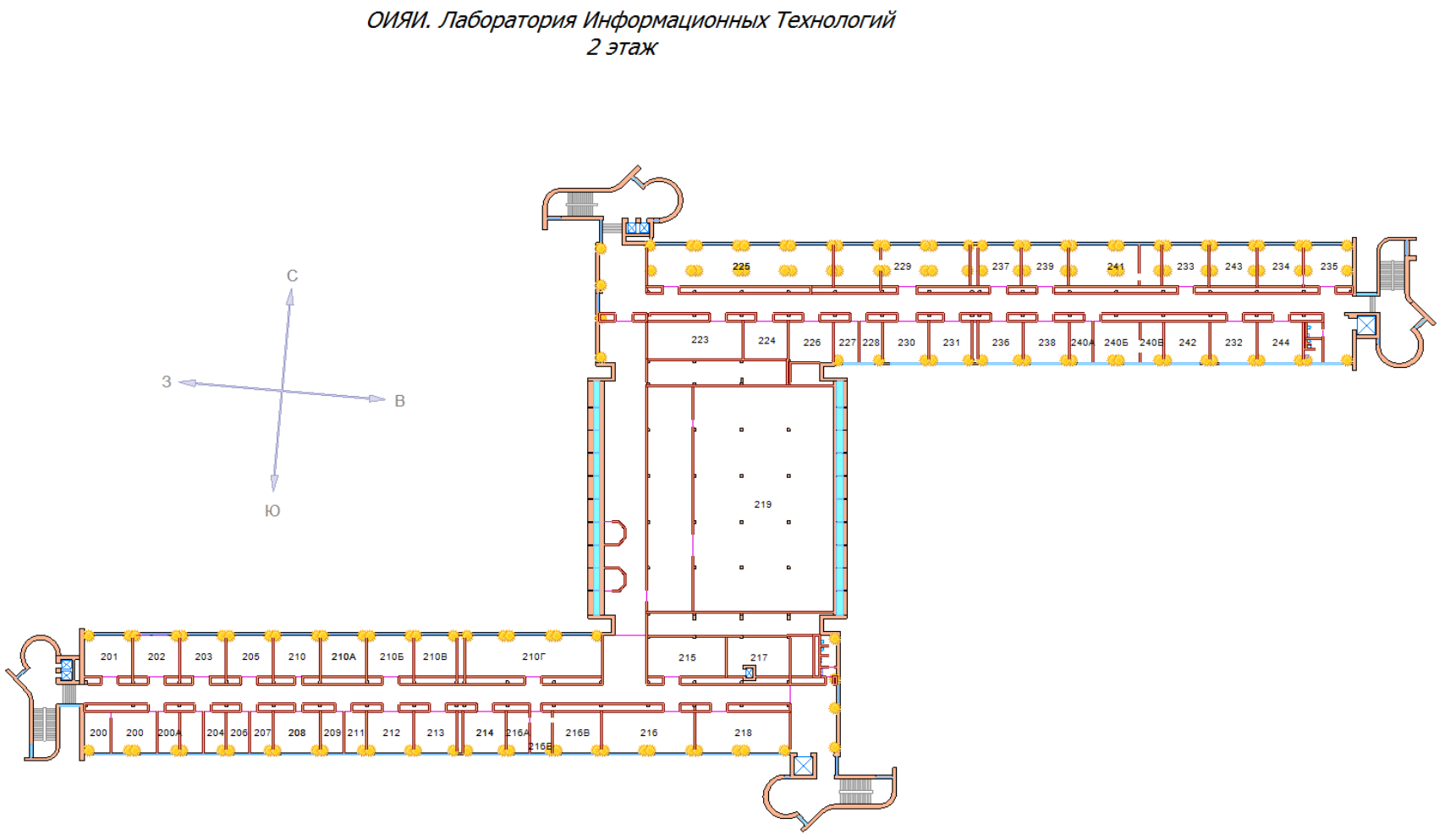




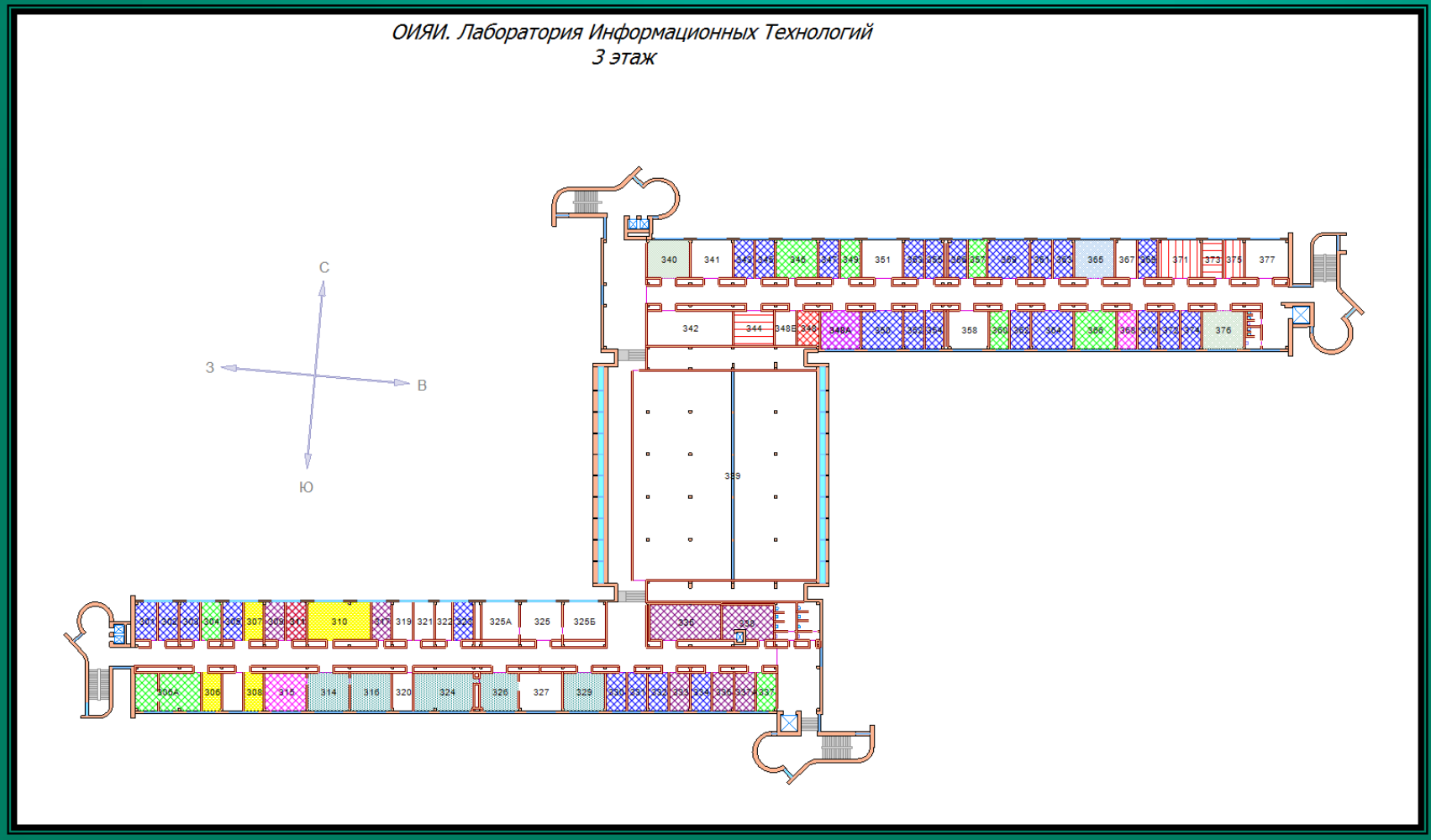
On the basis of the KGIS software product of the company ERMA SOFT, the following works were performed:

- A frame of all floors of the laboratory building was created on the basis of construction drawings and building inventory;
- The existing walls and windows of the laboratory building are marked;
- The location of point objects of electrical networks is plotted - highways on all floors of the laboratory;
- The location of hot and cold water supply drains is plotted on all floors of the laboratory;
- The location of the heat supply on all floors of the laboratory is plotted;
- The location of telephone communications on all floors of the laboratory is plotted;
- A diagram of cold water supply communications on all floors of the laboratory was drawn;
- A diagram of hot water supply communications on all floors of the laboratory was drawn;
- A diagram of utility sewerage communications was drawn on all floors of the laboratory;
- A fire alarm scheme has been drawn for all floors of the laboratory;
- Construction axes on the laboratory building were plotted;
- A webcam was installed in the computer room of the second floor of the laboratory, which can be accessed through Erma-soft;
- The premises belong to different departments;
- A table with the existing footage of the premises has been created;
- An inventory of the premises was carried out in order to prepare for the repair.

The example of the 2nd floor of LIT JINR - Heat supply



The example of the 3rd floor of LIT JINR - Affiliation of premises to subdivisions



Further development of CGIS:

1. Filling the system with the placement of laboratory staff and maintaining the relevance of this information;
2. Application of the "Stormwater drainage" layer - point objects and communications scheme;
3. Application of the "Conditioning" layer - point objects and communication scheme;
4. Application of the "Computer communication" layer - point objects and communication scheme;
5. Application of the layer "Fire extinguishing system" - point objects and communications scheme;
6. Application of the layer "Ventilation" - point objects and communication scheme;
7. Development of the possibility of accessing the video surveillance system from the Erma Soft program;
8. Development of the ability to print floor plans with a nano-layer of the selected layer and a legend to it on one sheet;
9. Development of the possibility of creating an archive for the installation / dismantling of engineering networks;
10. Development of the possibility of creating an archive of completed construction works;
11. Development of the ability to load room drawings into the system;
12. Development of the possibility of integration with 1C "Supply" for the convenience of carrying out equipment inventory.

THANK YOU FOR LISTENING!!!