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SMART CLINIC DESIGN TECHNOLOGIES

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Keywords: smart clinic, single information space, layer hierarchy.

Abstract. For many private users the use of smart technologies is mainly a means of increasing personal comfort (multimedia, lighting, etc.), but for the development of medicine digital transformation is necessary. An extensive path is no longer possible. This became very clear in the context of the COVID-19 pandemic, when patients and doctors were ready to use smart technology, but the health system was not.

ТЕХНОЛОГИИ ПРОЕКТИРОВАНИЯ «УМНОЙ ПОЛИКЛИНИКИ»

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Ключевые слова: умная поликлиника, единое информационное пространство, иерархия слоев.

Аннотация. Если для многих частных потребителей использование технологии «Умный дом» является в основном средством повышения личного комфорта (мультимедиа, освещение и т.п.), то для развития медицины цифровая трансформация является неизбежным шагом. Экстенсивный путь дальше не возможен. Совершенно очевидным это стало в условиях пандемии COVID-19, когда пациенты и врачи оказались готовы к использованию технологий, а система здравоохранения – нет.

An integrated device management system is called a smart house. This technology has already been successfully implemented in business, industrial production. Now it is necessary to develop into healthcare. Smart clinic is a medical facility that uses modern digital technologies to simplify healthcare workflows, improve the quality of services, reduce the pressure on clinic staff and ideally increase patient comfort and satisfaction.

We propose that a smart clinic is a set of continuously interacting layers like a typical social-industrial complex [1, 2].

The outer layer provides service to the patients of the clinic. It is a technological platform for medical people and patients, which:

- helps the clinic to digitize all patients information;
- provides constant monitoring of the patients health and location;
- allows patients to receive additional services;
- uses intuitive interfaces and is easy to use;
- provides touch between medical personnel;
- optimizes work processes in the clinic, …

The inner layer of a smart clinic uses the concept of smart house [3, 4]. It contains security systems, engineering infrastructure management systems, automatic control systems for equipment operation, receipt of drugs and consumables, etc. This is a complex solution, the technologies for which have only just been implemented and have not been fully implemented anywhere else (fig. 1).

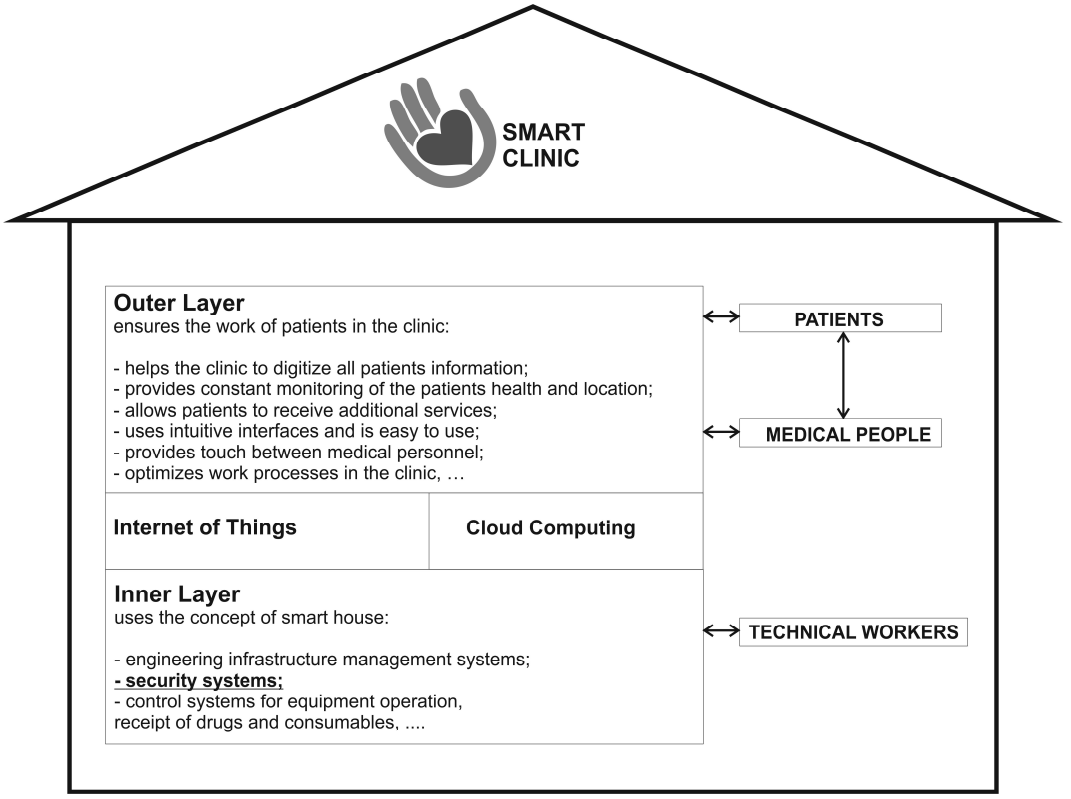

Fig. 1. Smart clinic model

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