

Figure 1 – Layout of fiber optic modems

Conclusion. As a result of the study, the basic principles of fiber-optic technologies were considered, the type of the MOF E1x32 fiber-optic transmission system was determined, and a communication organization scheme was developed taking into account the types of stations under consideration and the technical capabilities of the studied E1x32 MOF transmission system. In addition, it was concluded that the expected probability of distortion does not exceed the allowable value, which means that the connection will fully comply with all fiber optic standards.

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WEB RESOURCE OF FOLK CRAFTS

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Keywords: web application, folk crafts, information systems, internet platform, electronic trading platform.

Nowadays it is difficult to find a platform on which you can quickly, and most importantly, conveniently register as a participant in an exhibition. This web resource is just designed to organize, promote handicrafts and their manufacturers. The site has a nice design, a news section, as well as extensive functionality for moderating and administering content.

Material and methods. The main technologies and methods used to create this system were HTML, CSS, JS, PHP, Laravel, MariaDB. The entire visual part for the

development of the interface is made using HTML, CSS, JS. The server part is implemented in PHP, Laravel [1]. MariaDB is used as the database management system.

Findings and their discussion. The developed application has extensive functionality and capabilities. When entering the system, the possibility of authorization is provided (Figure 1).

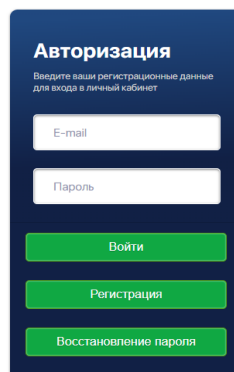


Figure 1 – System page with registration

When working with this system, any user has the opportunity to register for the exhibition as a participant, view the latest news. When registering, the user is prompted to choose their status: individual, legal entity.

It is also possible to register a user as a participant in an exhibition or fair announced by the organizers (Figure 2).

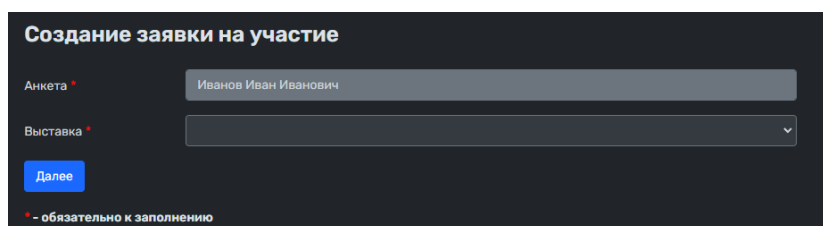
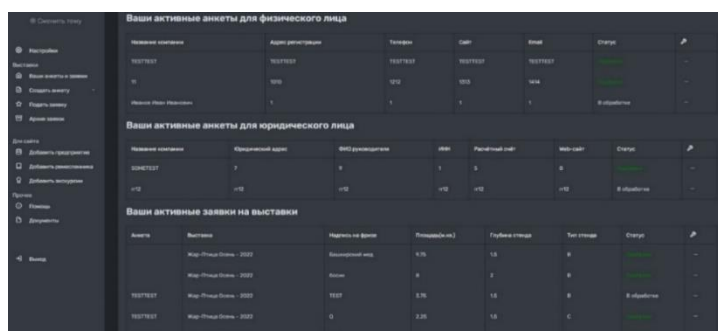


Figure 2 – The page for creating an application for participation

This web resource provides registered manufacturers or artisans with the ability to manage information about their products. This can be implemented through the working rooms of the participants of the exhibition or fair created for this purpose (Figure 3). Here, in addition to your personal data, which can be declared either as an individual or as a legal entity, you can also see the status of the submitted application for participation in the event.



Ваши активные анкеты для физического лица					
Новая заявка	Адрес регистрации	Телефон	СНИЛС	ИНН	Статус
10377937	10377937	10377937	10377937	10377937	В обработке
10377937	10377937	10377937	10377937	10377937	В обработке

Ваши активные анкеты для юридического лица						
Новая заявка	Образовательный адрес	ИНН организации	ИНН	Расчетный счет	ИНН-код	Статус
10377937	10377937	10377937	10377937	10377937	10377937	В обработке
10377937	10377937	10377937	10377937	10377937	10377937	В обработке

Ваши активные заявки на выставки						
Анкета	Выставка	Начало на вышке	Площадь(м.кв.)	Глубина(метра)	Тип стенда	Статус
10377937	10377937	10377937	10377937	10377937	10377937	В обработке
10377937	10377937	10377937	10377937	10377937	10377937	В обработке
10377937	10377937	10377937	10377937	10377937	10377937	В обработке

Figure 3 – Personal account interface

Conclusion. The technologies and software tools listed above for developing a web application were chosen because they are proven, secure, and have extensive documentation. In particular, the Laravel web framework, in addition to having extensive documentation, also has access to a huge number of additional modules, which improves the quality of software and speeds up its creation. The database management system was chosen due to the fact that it is safe and easy to use.

The practical application of the considered web resource can be found as an additional functionality on sites for the promotion of goods and services related not only to the field of folk craft, but also in any companies organizing exhibitions and fairs. In addition, the successful practice of using such applications in the educational process in practical classes for students of both IT specialties [2–3] and specialties related to the management of any goods and services [3–4] is known.

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SPECTRAL ELLIPSOMETRY OF NICKEL OXIDE FILMS

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Keywords: spectral ellipsometry, optical constants, thin films, nickel oxide.

Nickel oxide (NiO) is used to create photovoltaic solar cells, which has unique optical and electrical properties, as well as good chemical stability. It is necessary to develop technological regimes for obtaining thin NiO films with optimal characteristics for their use in photovoltaics. The optical characteristics of the films (the refractive indices $n(\lambda)$ and absorption $k(\lambda)$), determined by the method of spectral ellipsometry, are studied. The spectra $\text{tg}\Psi(\lambda)$ and $\text{cos}\Delta(\lambda)$ were measured on an ES-2 spectral ellipsometer [1] of the studied nickel oxide films on silicon and glass substrates at radiation incidence angles of 75° , 70° , 65° , and 60° in the spectral range – 400–1000 nm zone.

Material and methods. In order to determine the dispersion of the refractive indices $n(\lambda)$ and absorption $k(\lambda)$ of the films under study, an algorithm was developed for solving the inverse problem of spectral ellipsometry for the model of a two-layer wedge on a semi-infinite substrate (Fig. 1).