



How to identify, protect and commercialise your intellectual property?

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The creation of scientific and technical products (STP) and intellectual property

- In Ukraine the STP are most often created as a result of activity of research institutions and universities
- For more effective work is necessary:
 - The choice of the priorities in innovation activity, in Ukraine these are: biotechnologies, energy, environment, IT technologies, nanotechnologies, new materials and new varieties of plants;
 - The estimation of the most attractive market for each of the direction of activities in Ukraine and abroad
- The directions of activities
 - Fundamental and applied researches
 - Development work
 - Production of samples of innovative products

Protection of Intellectual Property Rights (IPR)

- In the Enterprise Europe Network (EEN) the following forms of the IPR Status are used:
 - **Copyright** (literary, musical works, scientific articles, etc.)
 - **Design Rights** (Industrial Design)
 - **Exclusive Rights** (property rights or exclusive license)
 - **Granted patent or patent application essential**
 - **Other** (registered design, plant varieties, etc.)
 - **Patent(s) applied for but not yet granted,**
 - **Patents granted** (property rights)
 - **Secret Know-how** (trade secret)
 - **Trademarks** (marks for goods and services).

Why do the patent required?

- The basic principle: Patent is a protection document for a new product on the market.
- The protection is built gradually over time and has the following stages:
 - An application for invention in Ukraine (12 months of temporary protection of worldwide);
 - The International Application (PCT) (30 months of temporary protection of worldwide);
 - Transition to the national phase in selected countries - granted of national patents

Estimation of the protection time is very important in assess of costs for maintaining of your intellectual property protection in active form

Commercialization of scientific and technical products (STP)

- Determination of what exactly is the product created based on the STP
- Estimation of potential markets for this product
- Development a strategy of protect for the new product on the market (When? What form in? Project funding?)
- Preparation of the STP description on pre-designed and agreed forms (eg, at the EEN standards)
- Search of the partners for transform the R&D research into the market product and / or for organization of production and sales :
 - Working with technology transfer networks (the EEN, for example);
 - Participation in specialized scientific and technical exhibitions with demonstration of prototypes, preparation of catalogs of the R&D product, formation of offers to the contests of the R&D projects and grants and etc.
 - Collaboration with the Corporation "Science park Kyiv Taras Shevchenko university"

Working with the EEN

- Taras Shevchenko National University of Kyiv (the University) is a member of the Consortium EEN-Ukraine. That in particular gives :
 - A free to submit their own offers in the EEN;
 - To provide the service in the preparation and presentation of the offers from other Ukrainian companies in the EEN.
- Members of the Consortium EEN-Ukraine are :
 1. State Service of Ukraine for Regulatory Policy and Entrepreneurship Development.
 2. Kyiv City Center for Investment and Development.
 3. Institute of Physics of NAS of Ukraine.
 4. Commerce and Industry of Ukraine.
 5. Taras Shevchenko National University of Kyiv.
 6. New Investment Corporation.
 7. Representation of Ukraine in the European Union.
- During 2014 the University published in the EEN 26 offers (among them the 19 from the University and the 7 from the institutions of NAS of Ukraine), including the 24 technology offers and the 2 business offers;
- On the 7 offers the first contacts with European companies interested in collaboration were realized

Types of profile in the EEN

- Business Offers/Business Requests
- Technology Offers/Technology Requests
- Research Development Requests

Stage of Development for profiles in the EEN:

- Already on the market
- Available for demonstration
- Concept stage
- Field tested/evaluated
- Project already started
- Project in negotiations - urgent
- Proposal under development
- Prototype available for demonstration
- Under development/lab tested

Short form of profiles presentation based on the EEN profile Details

Short Technology Offer:

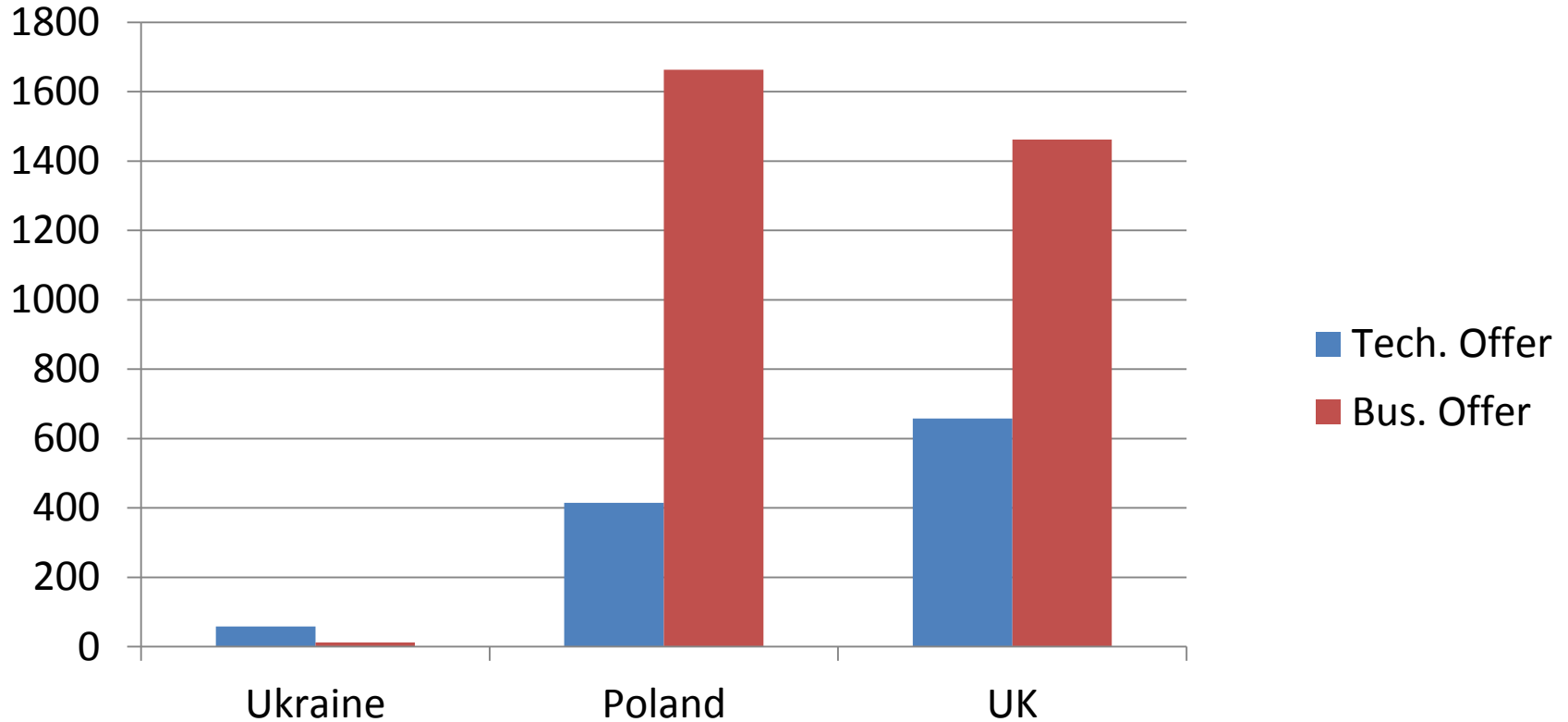
- **Title.** It should be clear and attractive
- **Description.** Describe the main results or characteristics of the offer (put the emphasis on explaining the “what” and not on the “how”), describe clearly the economic advantages/benefits of the offer compared with analogues (preferable to use numerical characteristics), a brief description of your capabilities (for example, indicate, if you have, availability of laboratory equipment for product, product samples, etc.), IPR status.
- **Description of Partner Sought.** You should state clearly what you expect from your partner. You should specify the type of partner sought (industry, academic, research organization, business etc.) and his country (one or several or does not indicate altogether), the problem facing the partner and which type of cooperation you consider as the most appropriate.
- **Illustrations and contact information.**

Short Business Offer (scientific and technical service):

- **Title.** It should be clear and attractive
- **Description.** Describe what kind of service is provided, advantages in comparison with analogues, a brief description of your capabilities, IPR status if possible.
- **Description of Partner Sought.** You should state clearly what you expect from your partner. You should specify the type of partner sought (industry, academic, research organization, business etc.) and his country (one or several or does not indicate altogether), the problem facing the partner and which type of cooperation you consider as the most appropriate.
- **Illustrations and contact information.**

Statistics of offers placement in the EEN

Number of offers



For December of 2014 in the EEN was published:

From Ukraine - 58 technology and 12 business offers;

From Poland - 415 technology and 1663 business offers;

From UK - 658 technology and 1462 business offers.

The EEN opportunities for search of partners for the program H2020

- Login to the network: the site address <http://een.ec.europa.eu/> or dial EEN in Google and choose site: [Enterprise Europe Network](#)
- After enter at the EEN site, select: [Search](#) for profiles matching your partnering
- Search of profiles at the EEN can be implemented
 - or by country
 - or by types of profile
 - or by keyword (technology or market), in particular after search by keyword H2020 will open more than 100 Research Development Requests under Horizon 2020 program with searching of appropriate partners for consortiums creation

The samples of offers prepared in the University in 2014

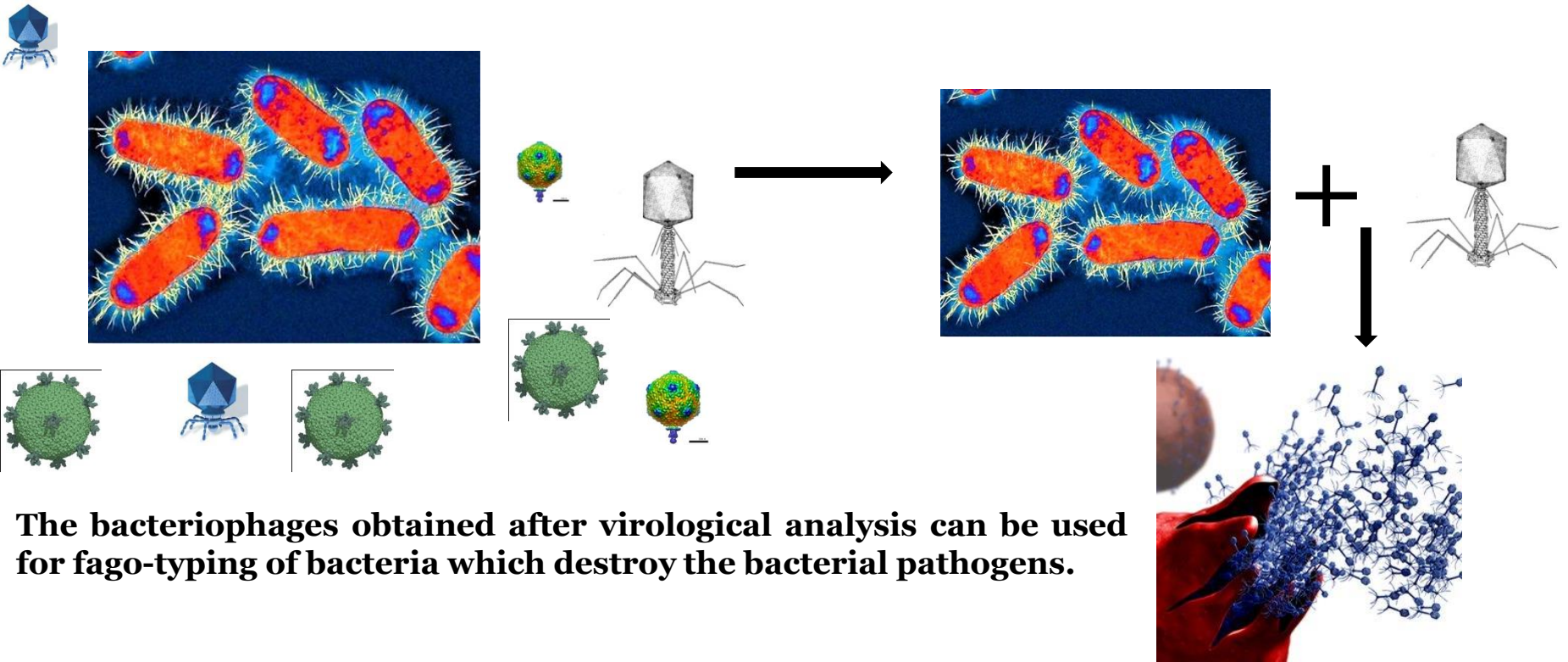
- During 2014 the database of the University P&D researches has been expanded to the 50 projects with commercial potential.
- Examples of the projects in priority directions:
 - Biotechnologies : Biological protection of agricultural and decorative plants against bacterial diseases using viruses of bacteria
 - Energy: Multi-junction PV converter and solar cell on its basis
 - Environment: The method of strengthening the reservoir banks
 - IT technologies: Technology of the building of reflex control systems of technical devices
 - Nanotechnologies: The use of metal nanoparticles in technologies of crop growing
 - New varieties of plants: New varieties of plants for landscape design of cities

Biological protection of agricultural and decorative plants against bacterial diseases using viruses of bacteria

- Each year, 10-90% of the crop is lost through the development of harm bacteria;
- One of the promising ways to protect plants from bacteria is the use of their viruses.

The ecological approach which is used at the University department of virology:

- 1) Discharge from environment bacteria and their viruses;
- 2) Determination of microorganism strains and virological characteristics of isolated bacteriophages;
- 3) Selection of bacteria and viruses to test their efficacy *in vitro* ra *in vivo*.

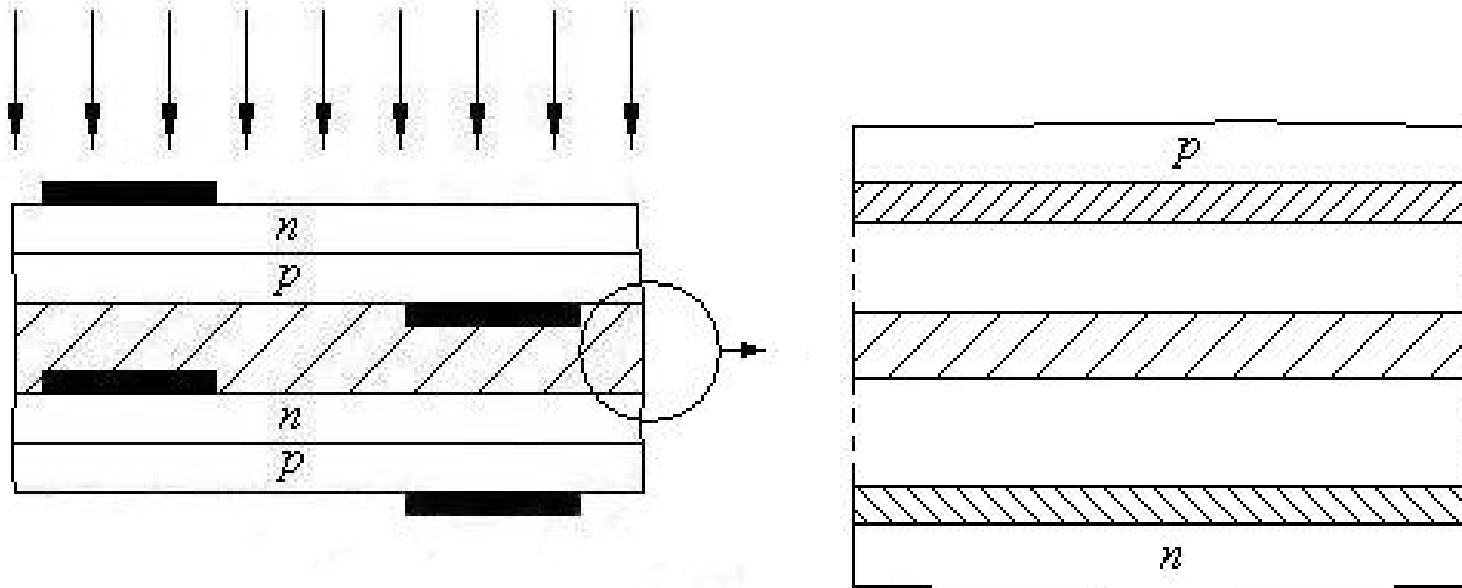


The bacteriophages obtained after virological analysis can be used for fago-typing of bacteria which destroy the bacterial pathogens.

Multi-junction PV converter and solar cell on its basis

Providing of optical coordination between active layers into the PV cell

Solar light



The method of strengthening the reservoir banks

Proposed a range of the most effective plant-hydrophytes for strengthening of the reservoir banks and the methods of their landing

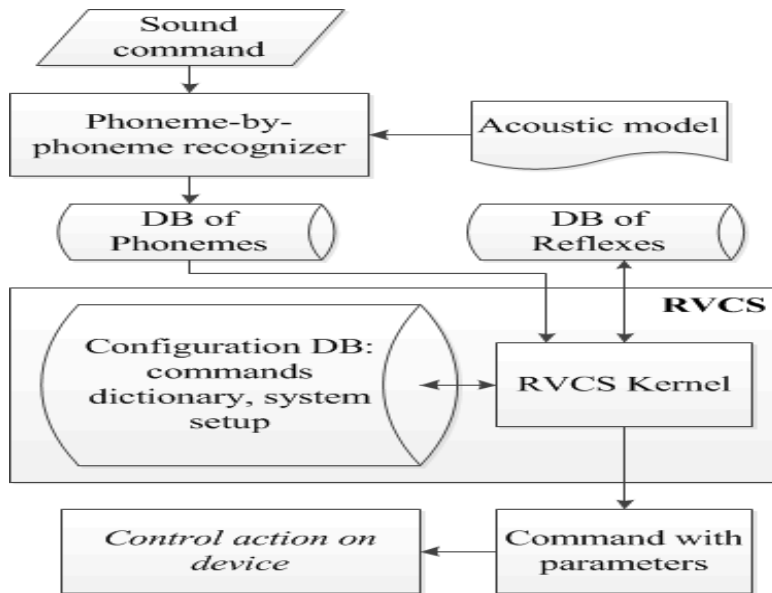


Technology of the building of reflex control systems of technical devices

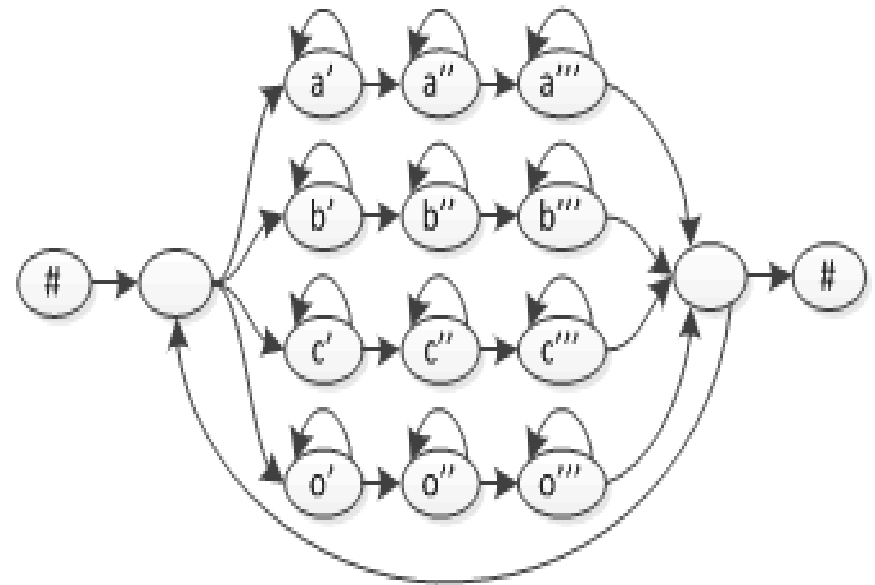
Smart technology that provides user interaction with technical devices and produces its own reaction (learning) like living beings by human voice, visual images, and more. For example, teaching of TV respond to voice.

The technology implementation

Structure of the voice control



The forecasting system



The use of metal nanoparticles in technologies of crop growing

Developed technology of using nanoscale biogenic metals as micronutrients for the induction of endogenous defense mechanisms, increasing the capacity of the production of plants in the system of rational Nature Management

The nanoparticles of biogenic metals have an extremely high activity and the sizes corresponding to the size of living cells,

So they act more effectively and are perceived safe as the micronutrients for the plants

As a result the application rates of vitally important microelements are significantly reduced and the risk of possible negative effects of overdose of fertilizers for the environment is decreased

New varieties of plants for landscape design of cities

Roses



Sakura



Magnolias



The University, as a member of the Consortium EEN - Ukraine, is ready to assist in the preparation and placement of the technology and the business offers in the EEN for all interested organizations in Ukraine, especially for universities and research institutes.

Thanks for your attention!

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