Presentation of the Donbass State Engineering Academy

Kramatorsk, Ukraine

21-23 February 2017

Oleksandr Tarasov

Tempus

DesIRE

1 Development of programmes and courses & pilot teaching

The team of teachers at the 3 departments of APP, CIT, ESA was formed (16 teachers in 2016).

The courses to implement modules (2014-2016) for bachelors and masters - 17 courses, for teachers retraining - 4 courses (APP, CIT - 2016) were determined.

The training courses in partner universities of the EU were complete (2014-2015) .

The training courses for teachers in DSEA were complete too. Seminars on pedagogy, development of the received hardware and software were hold. "New methods of teaching" (76 teachers in 2014), (29 in 2016).

"Altium Designer, Creo, Arduino, Raspberry Pi" - 2015).

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Activities that have been carried out for the development of the new teaching courses

ethodical support of courses have been developed. A number materials for distance learning was prepared (11 courses in 16). Additionally, 8 methodical instructions was developed .

ew laboratory stands are developed (more than 10), laboratory orks for the application of the ES and the development of ftware

chnology R-Lab «GOLDi» is being implemented.

e results of project was shared during the conferences for SEA teachers (9 reports -2015, 14 - 2016).

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Overall achievement level and impact

During 2015-2016, the retraining in English language for teachers carried out (60 teachers, 160 hours per year).

6 of them are involved in the “DesIRE” project.

Integrated graduation projects and works are performed.

More than 300 students participated in the pilot training during 2016 (17 courses, 21 students groups).

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nount of students participate in pilot teaching

Depart-ment	Number of teachers (in project)	Number of groups and students		Number of courses
		2015/ 2016	2016/ 2017	
ESA	6	2 (40)	5 (73)	6
CIT	6	6 (110)	9 (150)	5
APP	4	4 (44)	7 (96)	6

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DesIRE

evelopment of programmes and courses

Accreditation

creditation of departments on level 4 has

en done: CIT (2015), ESA (2016).

udents training specializations have been veloped (2015) (CIT - 3, ESA - 2, APP - 2 spec.).

training of teachers and (+) employees of terprises (second specialty) the graduation ojects have been defended (2015–5+1, 2016 -+3, 2017-10+17).

ense for retraining of teachers and employees (improvement of ofessional skills) was obtained in 2015. Retraining of 35 teachers CIT and APP departments started in February 2017

2 Equipment & learning tools

All the ES hardware, software and stands are installed in the laboratories of CIT, ESA, and APP departments and is available for students and training of teachers.

Computers are installed in room 2221 and used:

- for laboratory works;
- In the projects and works of students;

GOLDi remote lab: Process Cell - installed in room 2222a and is configured to perform remote labs.

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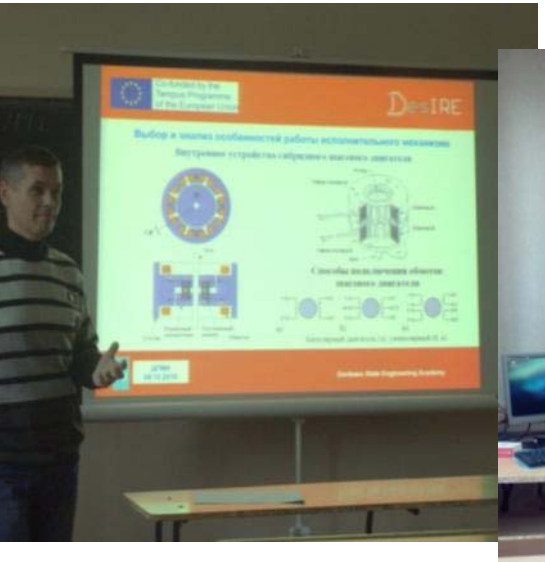
DesIRE

ctures on the ES, actuators and Altium Designer



Subotin O. (APP) PhD Ivchenkov M. (ESA) PhD Miheenko D. (CIT)

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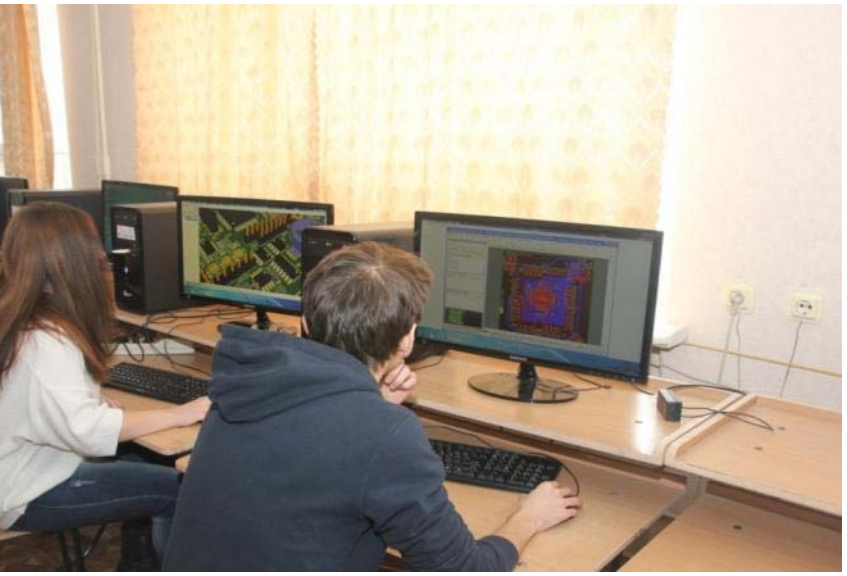
DesIRE

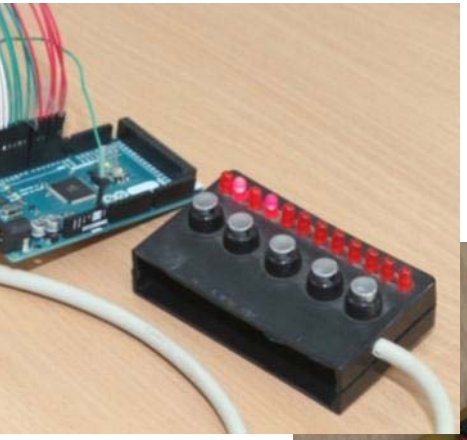
king with Altium Designer and Creo CAD-systems



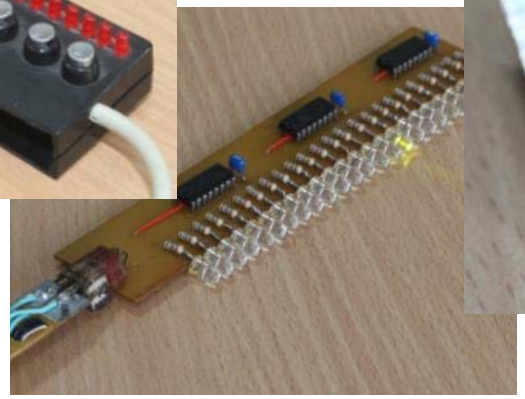
nts gr. IT 13-1 Gribelsky V. and
hinsky A. - Laboratory work on course
puter-aided design technology»

Students gr. IT AS 14-2 Kas'yanyuk A. and Denisyuk S. - The perform of technological practice

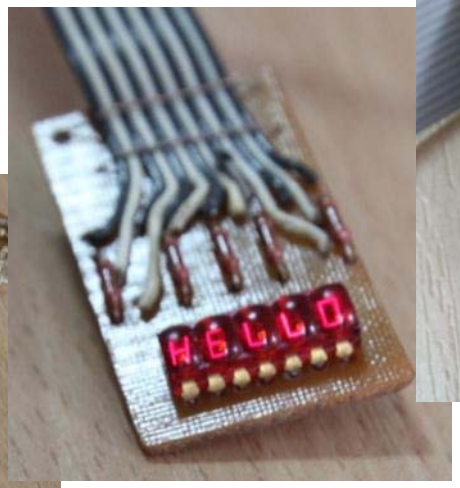
Stands for laboratory work



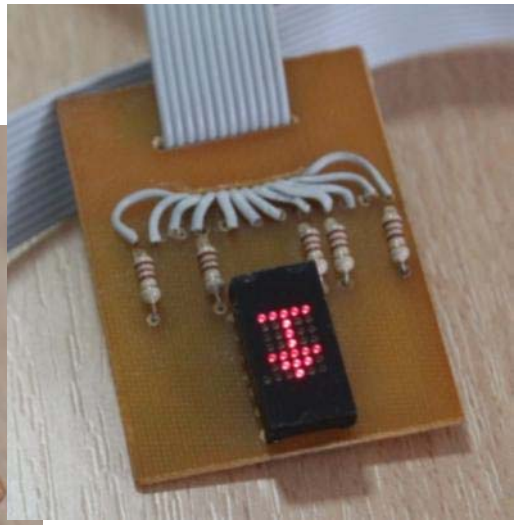
ng with
e input-
devices



Working with the device on SPI protocol



The control of 7-segments display

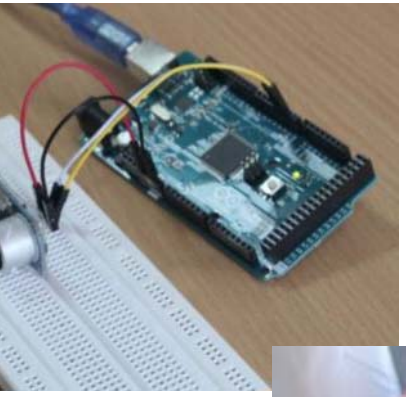


LED matrix control

Tempus

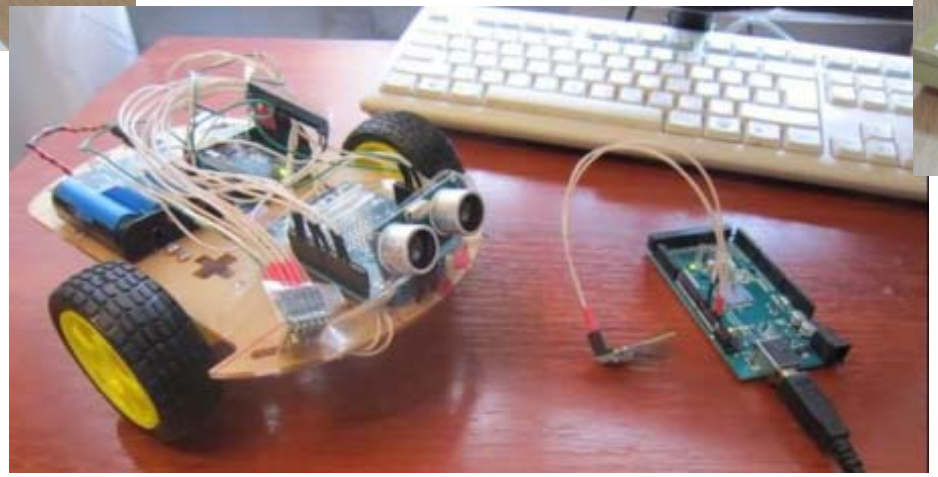
DesIRE

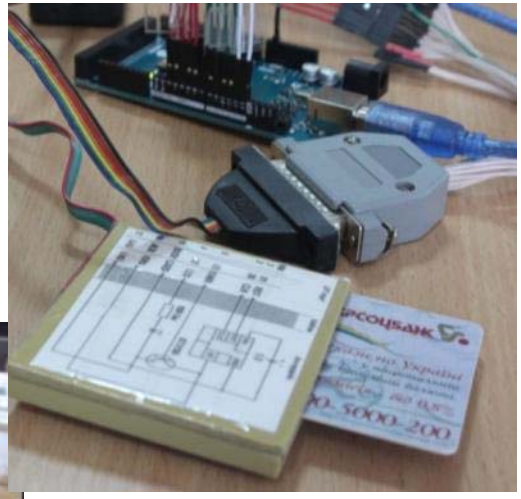
Stands for laboratory work



vith
nic range

Car Model with a range finder and Radio Link



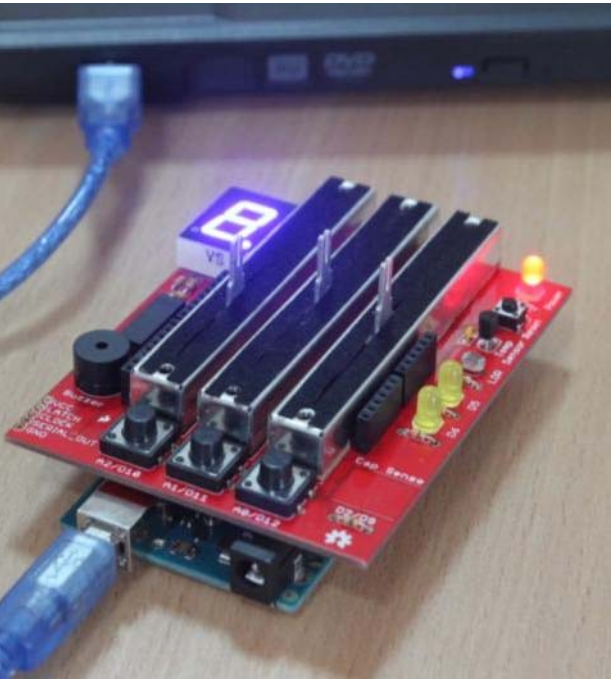


Reading the information from the phone cards

Tempus

DesIRE

Stands for laboratory work



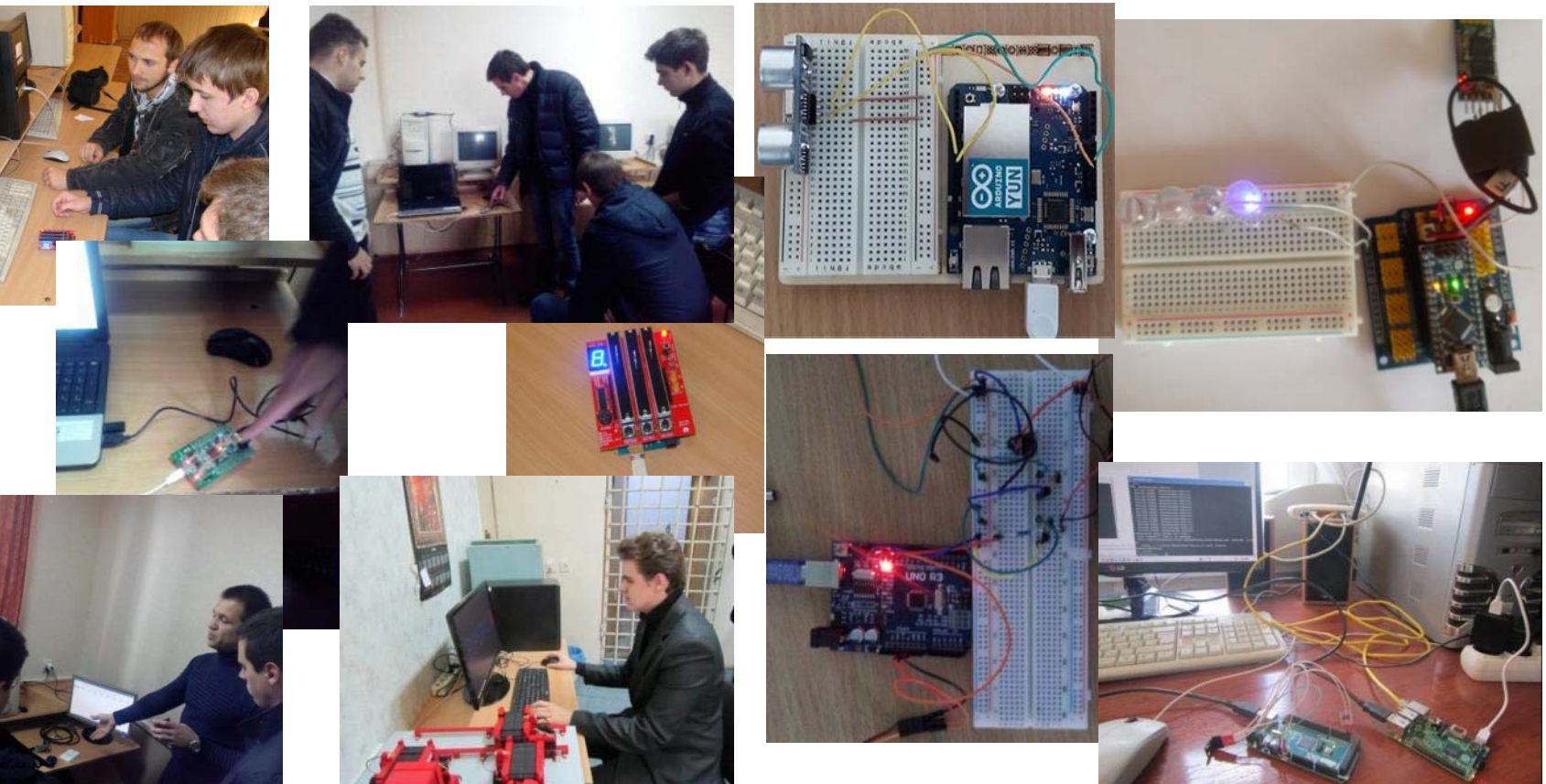
udying the expansion card
DangerShield

Studying the expansion card GLSD-Shield

Tempus

DesIRE

The use of different equipment



Tempus

DesIRE

The introduction of LMS Moodle system. Course development

Courses for teachers "Methods of developing distance earning courses in Moodle system" are carried out 76 people in 2015, 29 - in 2016).

ntroduction of methodology for course development in LMS Moodle was performed.

n 2016 98 courses in DSEA are already developed. Among hem 42 courses have been developed in 3 our departments.

1 courses in LMS Moodle, related to the subject of the project, was prepared.

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DesIRE

Student results from pilot teaching

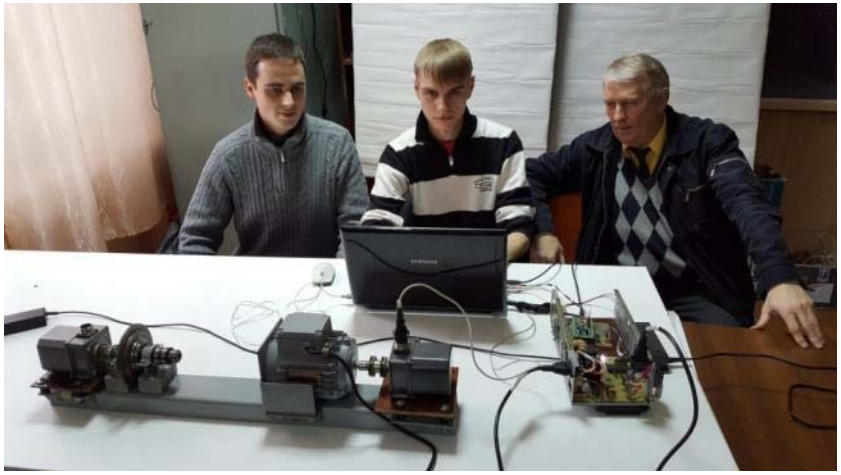
rt	2014/2015		2015/2016		2016/2017	
	Bachelor's thesis	Master's thesis	Bachelor's thesis	Master's thesis	Bachelor's thesis	Master's thesis
SA	-	-	5	1	5	7
PP	4	4	2	4	2	4
T	1	4	8	6	3	6

Tempus

DesIRE

«Variable frequency asynchronous electric drive using STM32Discovery»

ontrol Interface,
SB-UART converter (2016)



MA student: M. Kovalenko (IT 11m)

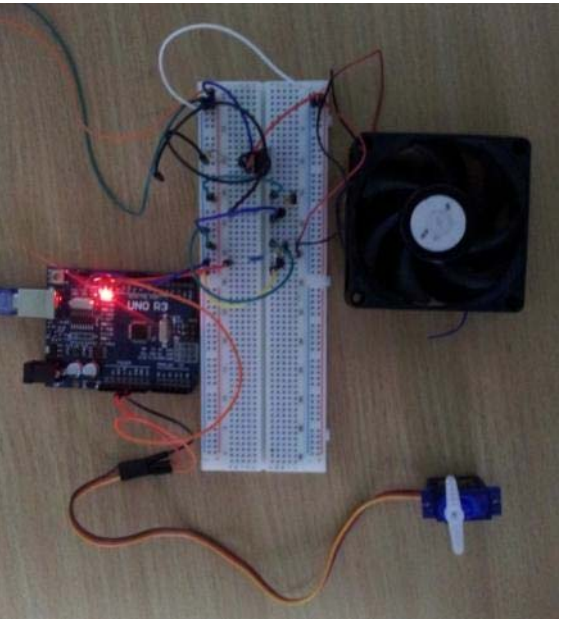
Assistant: A.Babash,

Project leader: PhD V. Kvashnin

Tempus

DesIRE

"Development of R-Lab System using Arduino, integrated with Moodle»



Master students Gridchin and Potemkin (IT-11-m) Project Leader: ???? (2015г.)

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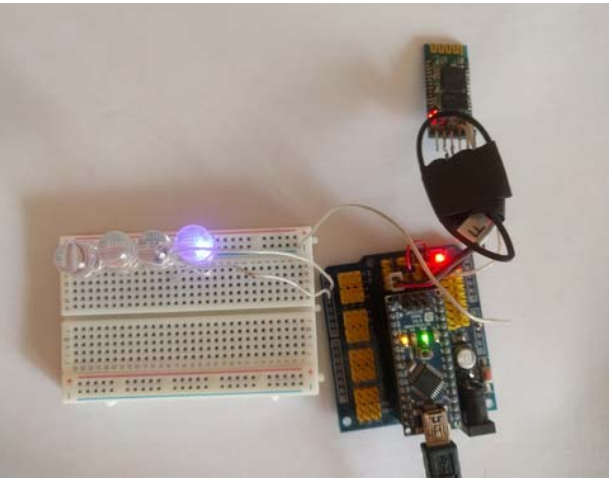
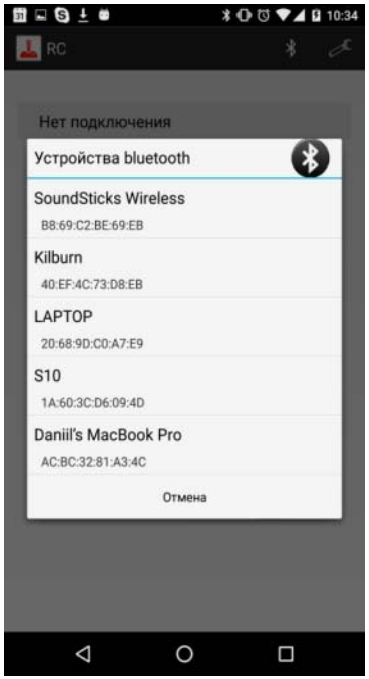
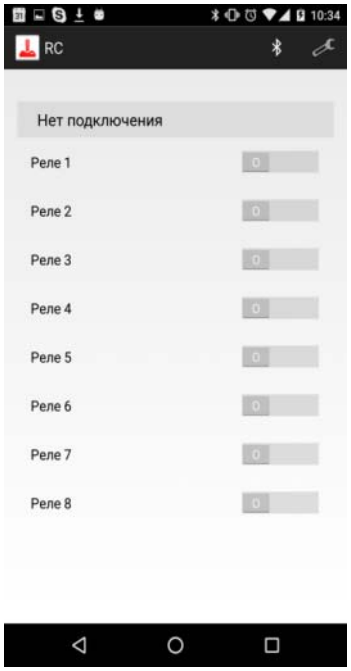
DesIRE

he software for device communication based on the Android operating system with Arduino using Bluetooth protocol



nd on the basis of Arduino
Bluetooth.
student Pavenko M.
ject leader: PhD Altukhov O.





Windows to connect the Bluetooth device
and controls

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DesIRE

10 masters projects in 2016

«Development and control of overhead crane installation using Raspberry Pi 2»

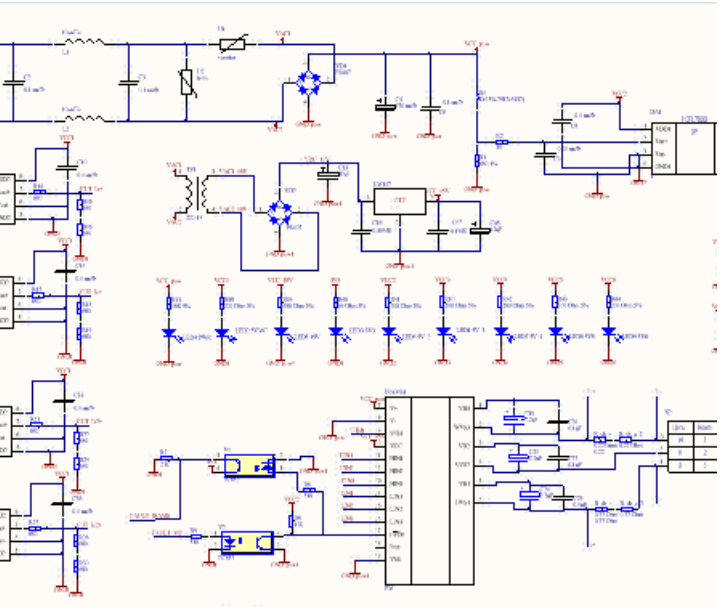
ead Crane Installation Masters and
elors Projects (ESA Department)

Masters: Filatov S., Timoshenko B.
Bachelor: Mozgovoi S.
Project leader: PhD Ivchenkov N.

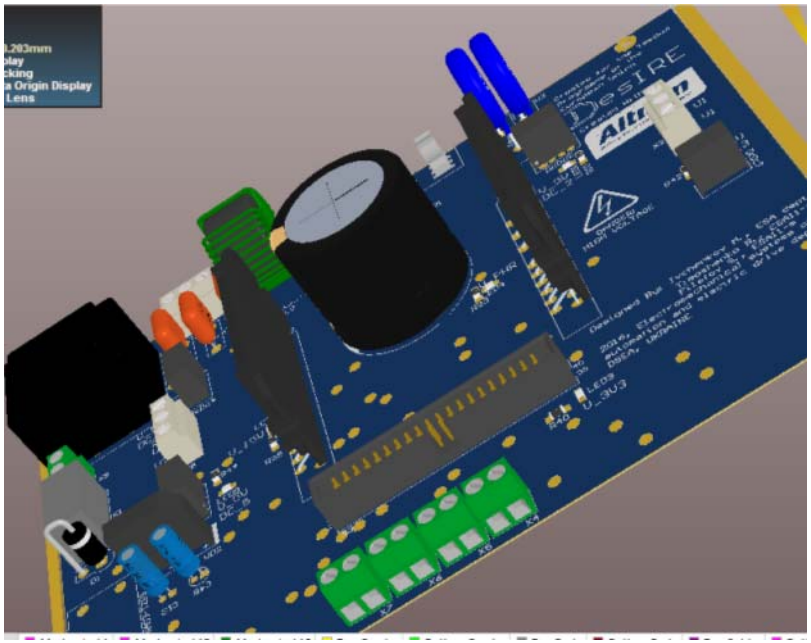
Tempus

DesIRE

The Development Process of Overhead Crane Installation for Remote labs – From Project to End Device



Altium Designer Schematics

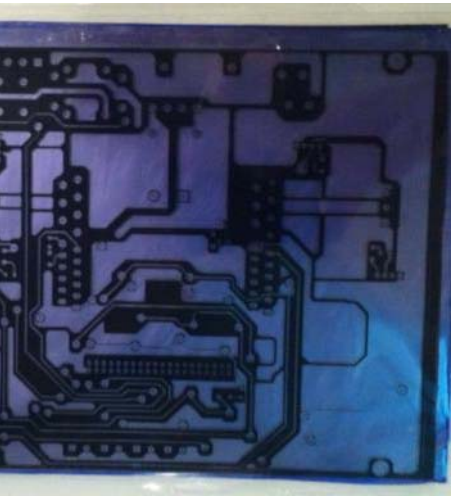


3D End PCB design

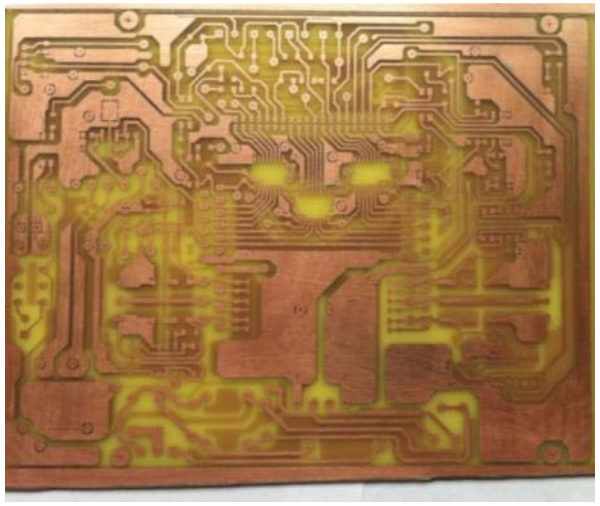
Tempus

DesIRE

The Development Process of Overhead Crane Installation for Remote labs – From Project to End Device



nufacturing - Photoresist



End PCB Example

Assembled Board

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The Development Process of Overhead Crane Installation for Remote labs – From Project to End Device

3D model

Metal Construction

Drives and ES Assembly

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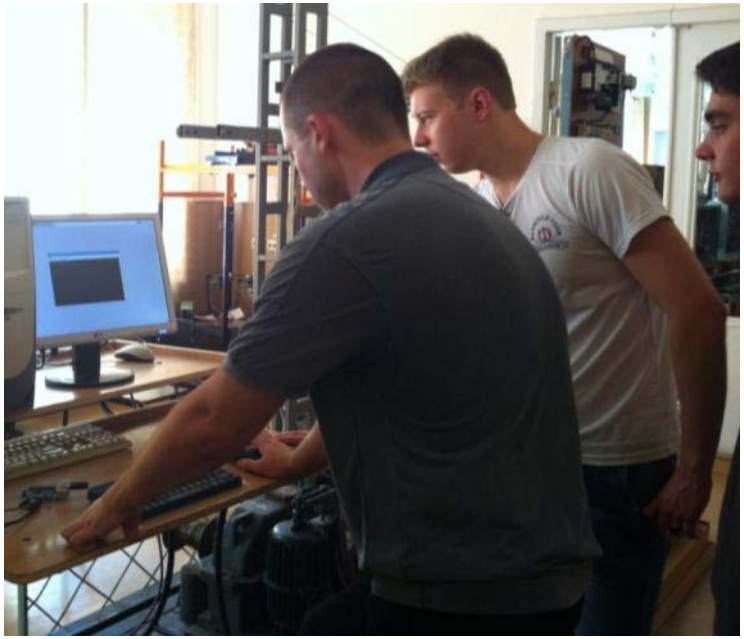
«Remote control system Design based on Raspberry Pi»

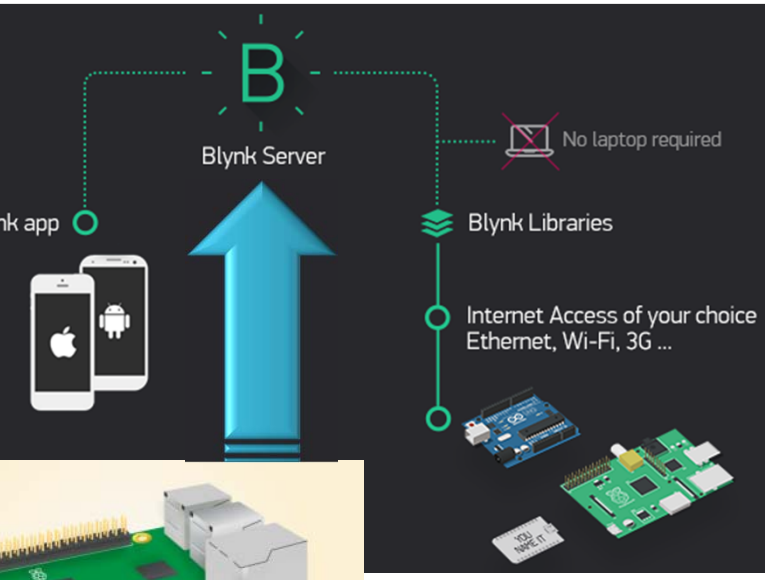


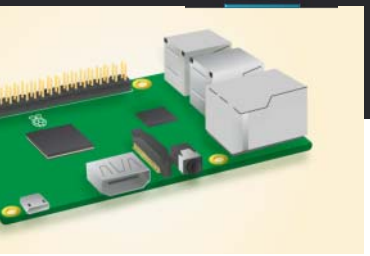
aster Belobrov O. (IT-11-m), Mozgovoi S. (ESA12-m). Project leader Ivchenkov M.

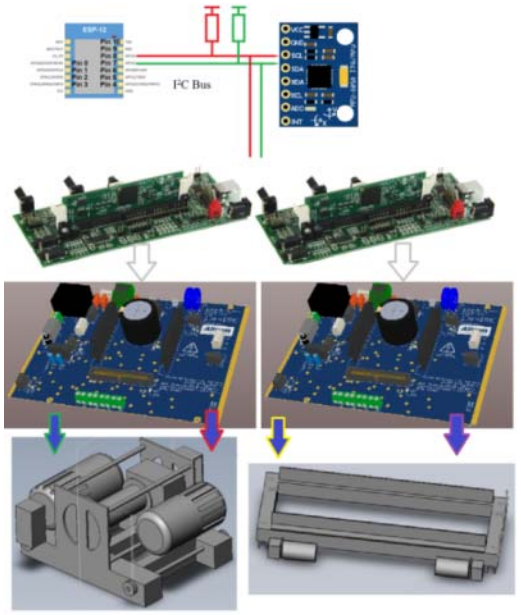
Tempus

DesIRE

The Development Process of Overhead Crane Installation for Remote labs»







Remote control concept realization using ES and Embedded Software (ESA Department). From Project to End Device

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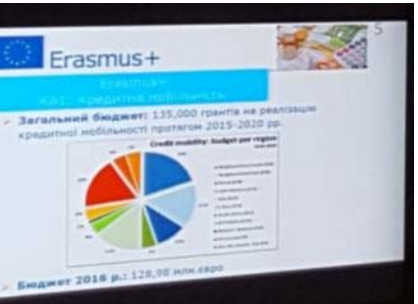
DesIRE

3 Dissemination and Sustainability

he training of highly qualified personnel for the development f scientific research and cooperation in the field of ES and ontrol Systems is carried out. P. Sagaida and A.Sheremet are octoral students on the Project theme.

here are 2 Postgraduates on the Project theme (V.Perepelitsa, .Babash)



Tempus

DesIRE

he development of international cooperation

New contracts / agreements

rsity Of Modern Sciences – CKM Mostar
and Herzegovina);

rsity of Pristina, Kosovska Mitrovica, Serbia.

rsity Union – Nikola Tesla, in Belgrade, Serbia.

bra Business School (Portuguese Republic,
).

еньский индустриальный институт (Казахстан).

key lab of powder Metallurgy, Central south
ty, China.

нёвский Государственный Педагогический
ситет им. Иоана Крянгэ, Молдова, г. Кишинёв.

бский государственный технологический
ситет Республика Беларусь, г. Витебск.

итут технической акустики Национальной
ии наук Беларуси, Республика Беларусь,
ск.

11 Agreements on cooperation have been signed in 2016

DSEA Rector V.Kovalov with representatives of firms: HEIDENHAIN in Ukraine - O. Naumenko, and Sandvik Coromant - E. Danilov

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The development of relations with enterprises

ommunication with companies, operating and developing
ontrol systems, established – there are 10 filial branches of
epartments at the enterprises (NKMZ, SKMZ, EMSS).

etraining teachers at DonNU (24 hours, 28 teachers)
Computer-oriented teaching for mathematical disciplines“
asenko E. (2014). Master classes in KUBG, ZNTU were done
015).

etraining teachers and (+) engineers (second specialty) on the
T department continues (2014/15 - 5 + 1, 2015/16 - + 3
udios, 2016/17 - 10 + 11).

n branches are trained more then 40 students per year.

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ncreasing cooperation between DSEA and the non-academic sector

y Minister MESU M.Striha and
resident of National Academy of
es of Ukraine, Academician
gkov in CIT laboratory.

rticle "Donetsk Research
: the path to recovery."

ewspaper «The Mirror of the
Ukraine» №5, 12-02 2016

/gazeta.zn.ua/science/doneckiy-nauchnyy-centr-put-k-vozrozhdeniyu- .html

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DesIRE

Increase opportunities of job placement

Career Day” (Profi express) events ere held in 2014-2016.

ound table on the topic "Self- mployment. Vocational guidance nd retraining " was held 25/11/16.

ollaboration with "Center of mployment" started in 2016.

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DesIRE

Regional conference «IT-Connect»

3 regional conferences «IT-Connect» are held in 2014-2016 at the Academy in the framework of Creative Union «IT-Kramatorsk». Companies: Quart-SOFT, STUDIO AlterEgo, SOLVEZHEN, IT 2.0 and others.

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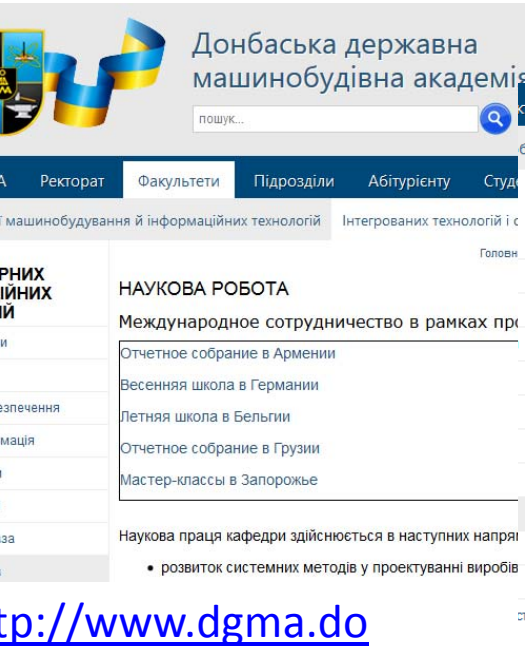
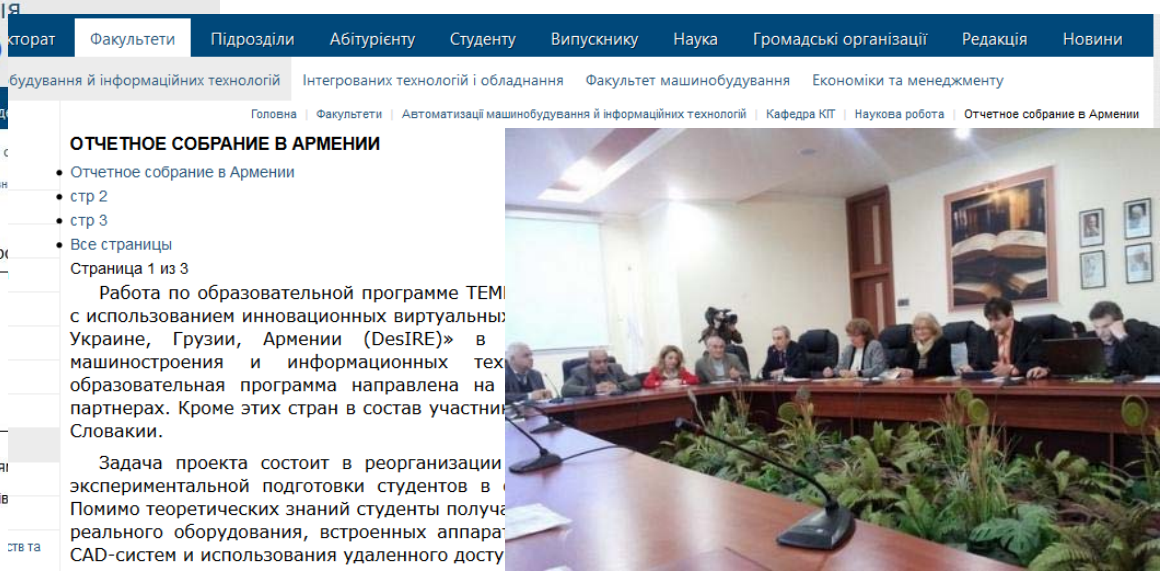
DesIRE

formation about the Project on DSEA website



http://www.dgma.donetsk.ua/nauchnaya-rabota-kit.html

The report on the conference in Armenia

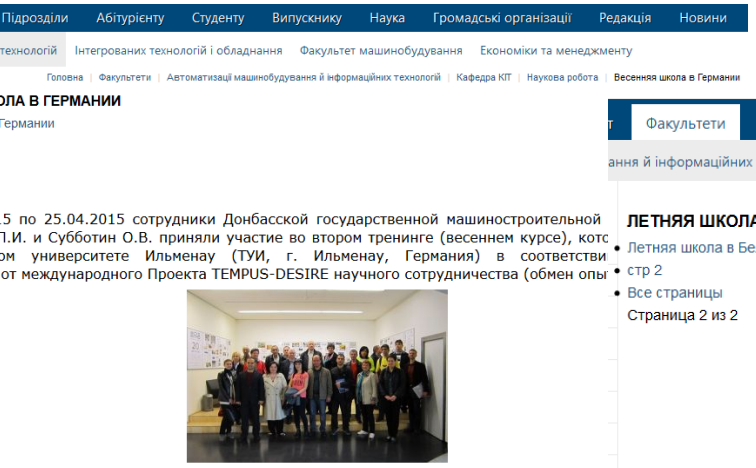


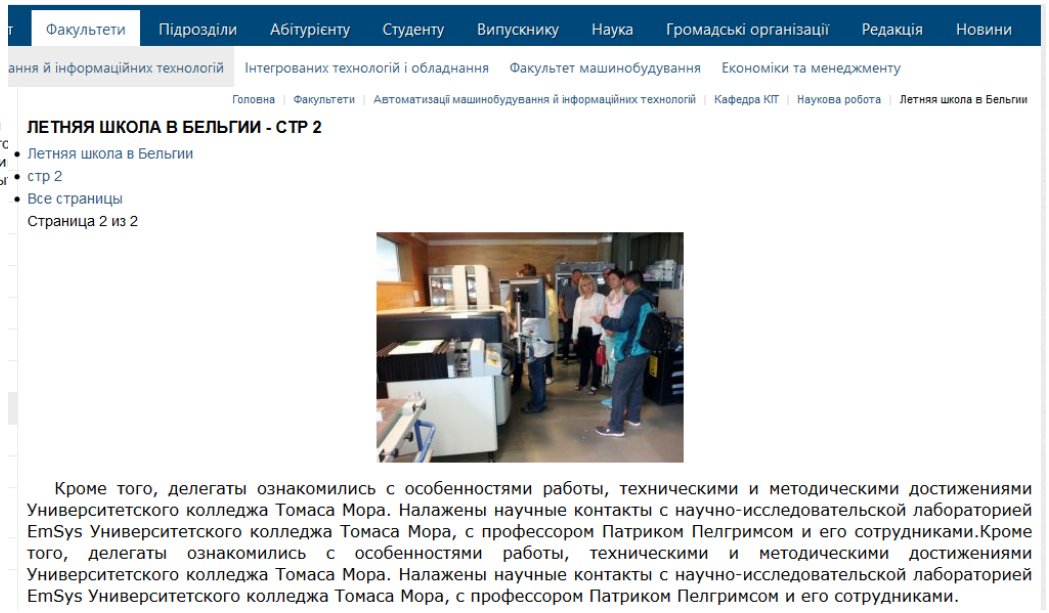
http://www.dgma.donetsk.ua/otchetnoe-sobranie-v-armenii.html

Tempus

DesIRE

The report about the retraining in Germany and Belgium





://www.dgma.donetsk.ua/v
nnyaya-shkola-v-
manii.html

http://www.dgma.donetsk.ua/letnya
ya-shkola-v-belgii.html

Conference Report in Georgia and master - classes in ZNTU

Підрозділи Абітурієнту Студенту Випускнику Наука Громадські організації Редакція Новини

ких технологій Інтегрованих технологій і обладнання Факультет машинобудування Економіки та менеджменту

Головна | Факультети | Автоматизації машинобудування й інформаційних технологій | Кафедра КІТ | Наукова робота | Отчетное собрание в Грузии

ОБРАНИЕ В ГРУЗИИ

ание в Грузии

ки ДГМА Тарасов А.Ф. и Сайда П.И. с 26.10.2015 по 31.10.2015 пос
техническим университетов в рамках Проекта TEMPUS- DESIRE.Сотруд
0.2015 по 31.10.2015 посетили мероприятия проводимые Грузинским
кта TEMPUS- DESIRE.

//www.dgma.donetsk.ua/otche
sobranie-v-gruzii.html

Факультети Підрозділи Абітурієнту Студенту Випускнику Наука Громадські організації Редакція Новини

ання й інформаційних технологій Інтегрованих технологій і обладнання Факультет машинобудування Економіки та менеджменту

Головна | Факультети | Автоматизації машинобудування й інформаційних технологій | Кафедра КІТ | Наукова робота | Мастер-классы в Запорожье

МАСТЕР-КЛАССЫ В ЗАПОРОЖЬЕ

- Мастер-классы в Запорожье
- стр 2
- Все страницы

Страница 1 из 2

С 14.10.2015 по 16.10.2015 сотрудники Донбасской государственной машиностроительной академии Тарасов А.Ф., Сагайда П.И. и Субботин О.В. приняли участие в мастер классе (обмен опытом, обучение), который проходил в Запорожском национальном техническом университете.

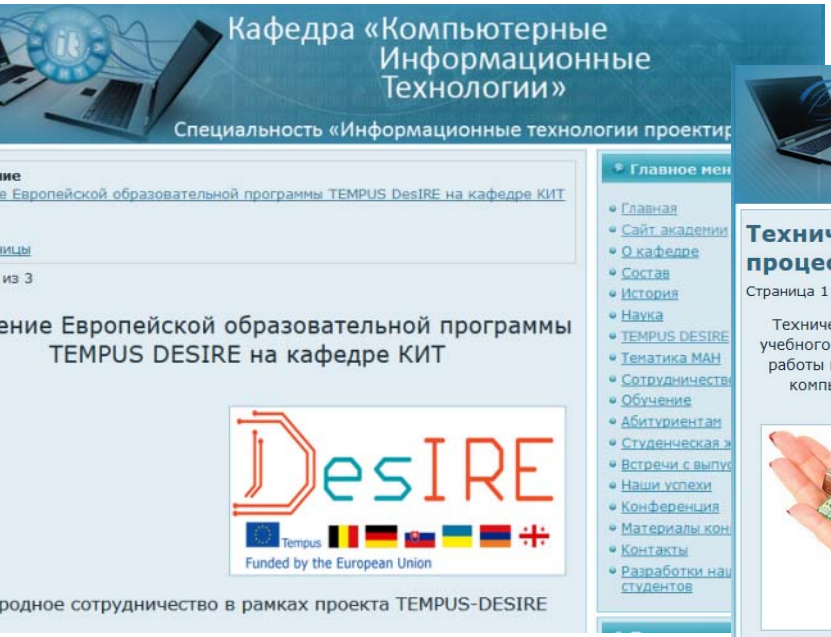
Они посетили мастер-классы, проводимые специалистами Пітером Аррасом, КУ Левен, Бельгія: Майстер клас з використання Creo, як інструменту для віртуального прототипування; Дірк Ван Мероде, TMMA, Бельгія: Майстер клас з розроблених курсів у коледжі Томаса Мора. Введення до ECAD, Майстер клас з основ VHDL, а также заслушали доклады коллег из КУБГ, Киев и ЗНТУ, Запорожье.

http://www.dgma.donetsk.ua/master-klassyi-v-zaporozhe.html

Tempus

DesIRE

formation about the project on the website of the CIT department



http://itp.dn.ua/tempus.html

http://itp.dn.ua/2015-12-14-17-19-28.html

Tempus

DesIRE

Participation in conferences, seminars, workshops, publications

total in 2016 33 reports on various nferences were prepared:

- ZNTU – 8; UKF Nitra – 11; DSEA teachers conferences – 14.
- 47 different publications were made in 2016 and total number is 80 over 3 years.
- The monograph was written in 2016

ZNTU Conference

Tempus

DesIRE

DEsIRE Simposium, UKF Nitra, 11-15/09/2016

11 reports on ways of using ES, R-Lab and LMS in the educational process and scientific work were prepared for the Nitra conference

event was attended by five chers from 3departments of A (CIT, ESA, APP)

4. Quality

For control of educational quality 120 students were interviewed. Most of the students have positive opinion about new discipline's content.

The students' interest to the discipline has increased.

There was 4 reports about the Desire Project at methodical council.

6 reports about working over the project were considered at the FAMIT council.

The issues of the project progress is considered at the DSEA council annually.

5. Multiplier effects

pected outputs

he rapid development of the LMS. For 2016 as a whole at the university eveloped 98 courses.

crease of student interest to study programming languages, ES and CAD ystems.

or teachers and students of various departments have increased the eed to collaboration.

here was a need for regular professional development of teachers. mplemented system of common training and professional development f teachers of high school

increases the interest of teachers in learning English

Tempus

DesIRE

Extra funding (e.g. state funding for research projects / master thesis's)

- Extra funding is obtained in:
- Contract with the "Motor Sich", Zaporozhye - design using CAD / CAE-systems (CIT - 2016), 2017 - in the process of concluding
- State budget scientific research in the field of computer science (data processing, CAD / CAE-system)
- Won a grant of state-funded research (CIT 2016-2018)

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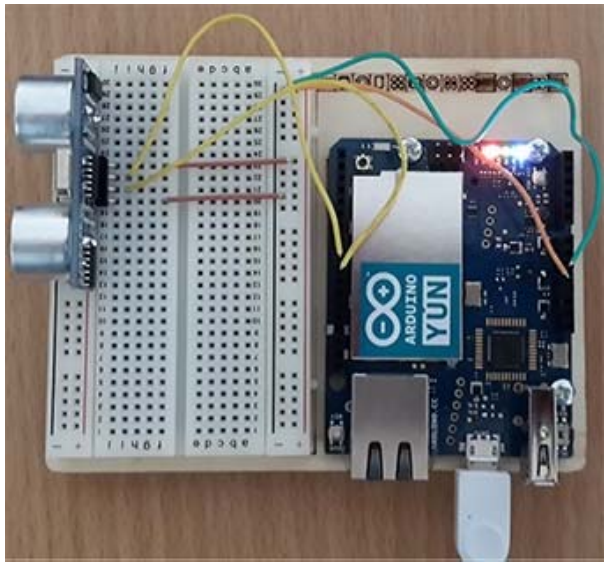
Start-ups




ГРАМОТА

XIV Міжнародна науково-технічна конференція молодих учених і спеціалістів «Електромеханічні та енергетичні системи, методи моделювання та оптимізації»

НАГОРОДЖУЄТЬСЯ

Перепелиця Володимир Вікторович

за II місце у номінації «Краща секційна доповідь»

graduate Perepelitsa V.V. at the XIV International Scientific and Technical Conference for young scientists and specialists "Electromechanical and energy systems, methods of modeling and optimization. “ Second place in the category "Best section report". Project leader: Sheremet O.I.

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poratory stand for the study of digital DC motor control systems»

asters Soldatenko O., Hrebynnyk M. (ESA-11-m), specialist Kirienko T. (ESA-11-2)
Project leader Sheremet O.

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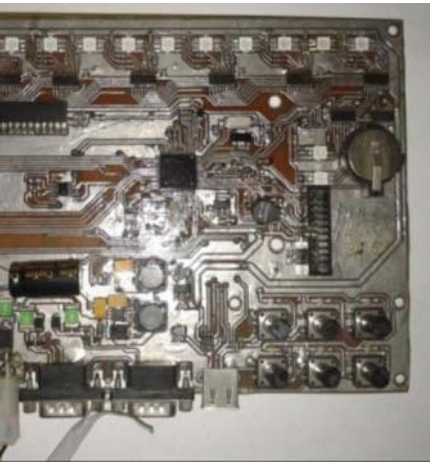
Control system design for seeding process in combine-harvester»



ghivin A.V. Donchenko Y.I.
P)

allation and software for
trol of seeding process

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Cooperation with government organizations

gional Meeting of Heads of educational institutions and research centers of Donetsk and Lugansk regions (05/02/16)

mation about
IRE" project

Deputy Minister MESU
M.V.Stryha

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Resumption of the Donetsk Scientific Center of NAS and MESU in DSEA

eting "The role of science in revival of Donbass" /05/16)

The Council of Donetsk Scientific Center of NAS and MES of Ukraine, dedicated to science,

Director of the Institute of Demography and Social Studies M.V.Ptukha, Academician of MES of Ukraine, E.M.Libanova

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DSEA Project Team

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Thank You
for Your Attention