

HIGGS BOSON



Show
issue

4

HIGGS BOSON

January 2017, Show issue 4

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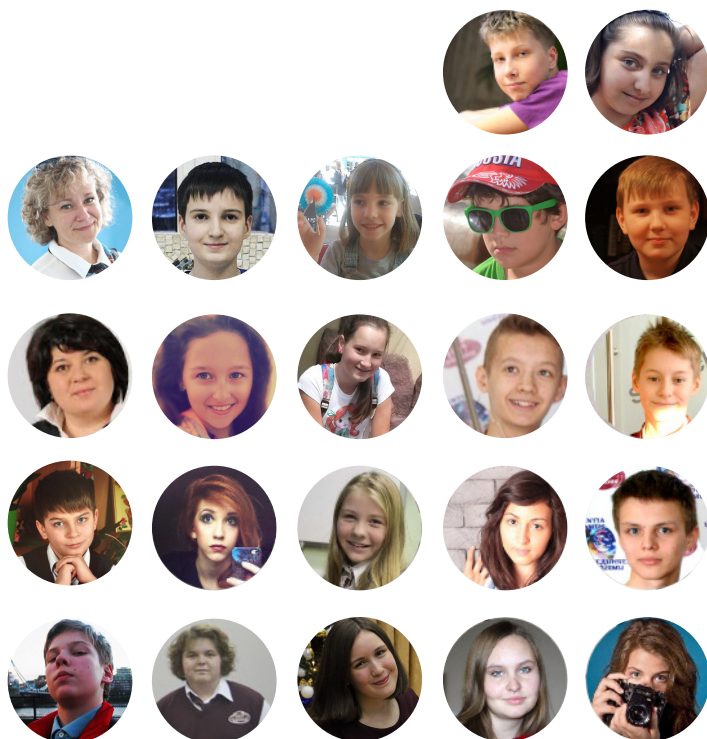
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SHOW ISSUE 4



‘Higgs boson’ is an almanac compiled and published by students and graduates of the High school 1517.

I have been lucky enough to be the editor-in-chief of the almanac for a particular period of time, and it has been a great experience. I have really taken to the atmosphere of the editorial board. What you are holding now is an issue which can be interesting for a large audience. It contains a wide range of materials, from articles about cats to reports about important innovation conferences.

Welcome to the exciting world of ‘Higgs Boson’ almanac!

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I enjoy telling school children and students that they are lucky to be born in a wonderful country where even the most incredible and ambitious dreams come true. One just needs to have a strong desire and to work extremely hard.

I like the story of my peer from Syzran who wanted to become a cosmonaut just like the majority of boys in the 1960s. He went into the army after school and then started working as a policeman. Once on duty he thought: "Am I doing the right thing? Did I dream about this as a child? What have I done to make my dream come true?" That was a turning point in his life. He entered Moscow Aviation Institute and graduated from it as an engineer specializing in liquid rockets. He worked as an engineer at Baikonur Cosmodrome and then at the Rocket and Space Corporation 'Energia' where cosmonauts were trained. Finally, he was enlisted as a cosmonaut and in April 2010, aged fifty, he flew into space and spent in total 560 days 10 hours and 43 seconds there.

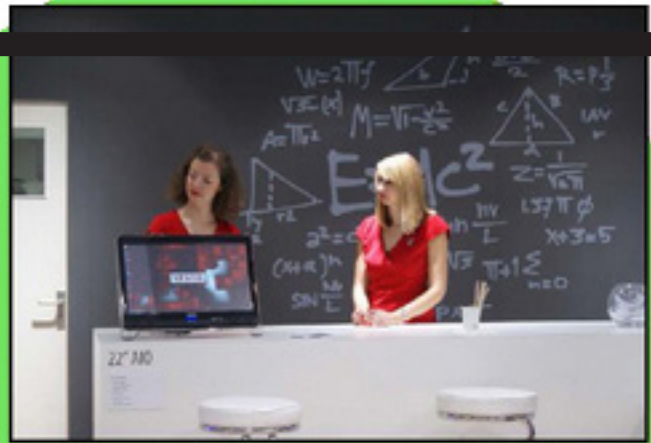
Choose the greatest dream you can think of and put all your efforts into making it come true. In case it seems that you are worn out, which is most likely to happen, remember just one name, Michael Kornienko. That is the name of the former policeman from Syzran. Never give up, you will make it.



In our word, In the word of IT-technologies, the concepts of science and business are closely linked. They complete each other and have a lot in common. We all know that without financial support, science simply cannot develop. And at the same time, if science is not developing, business would not be developing too, because it is primarily dependent on how quickly innovations and new technologies can be employed. These technologies of course are created with the help of science.

The correlation of business and science was demonstrated in London at the end of January – beginning of February this year at the BETT exhibition, where the delegation from our school participated. This exhibition was devoted to new technologies in the field of education, rather, making new programs will be useful for training pupils. This exhibition opens door for everybody in the world who's got latest developments in IT-technologies. Dozens of stands presenting new gadgets were placed all over this huge exhibition, Could they be created without financing from the government or private companies? The answer is obvious – of course not. We can say that now business is performing the role of soil for

science to grow on. In their turn, the fruits of science, falling on the ground, make it better and richer. This process is endless and correlative. Walking through the long corridors of the exhibition, you meet teachers and students who are interested primarily why this or that program is useful and if it is interesting for studying. On the other hand, you can see many businessmen who are interested in the commercial value of these projects. It was interesting to watch how these two groups share a lot of new, amazing and useful things. Walking along the pavilions of BETT exhibition, you notice huge fluid-lit signs, displays, advertising products, robots that were created for training purposes. Only here you clearly see how far scientific progress goes. Carried away by absolutely new characteristics of the product, you suddenly catch yourself thinking that you start to forget that behind the creation of all these robots there is a huge amount of money got through business. And it seems completely unimportant because the main issue is that it is technical progress! In fact, the exhibition had several rooms for making deals and, as a rule, they were always full of businessmen. Business insensibly is getting closer and closer to us. It is interesting to note that without good advertising, proper



achievements which had being created for many years, they will simply be not demanded. And advertising business helps to promote new products and increase the demand of them. After visiting this wonderful exhibition, I discovered a new correlation between science and business, better understood commercial side of scientific progress. This exhibition helped me to understand that all aspects of life are closely connected and they cooperate with each other. This is life and this is how its laws work.



Every year thousands of visitors from all over the world who are interested in improving and increasing the level of education gather in London to participate in the largest annual exhibition of IT technologies in education – BETT Show. Students and teachers from our gymnasium not only visited the exhibition, but also actively took part in some activities.



Delegation of gymnasium № 1517 consisted of 18 students grades 6-11. These are students who are actively involved in research and project activities, winners of research and project work competitions, Olympiads of city and Federal levels, the organizers of Scientific-practical Conference «SCIENTIA UNESCAMUS», which is held annually in the Gymnasium № 1517.



Visiting events such as BETT is a unique opportunity not only to see the latest achievements of science and technology in the field of education, but also to interact with colleagues from different countries, experts from the field of education, developers of exciting software and hardware solutions for children in a creative atmosphere. Information obtained from the primary source almost priceless, especially since all you can not only see and hear, but also to test, to try out.

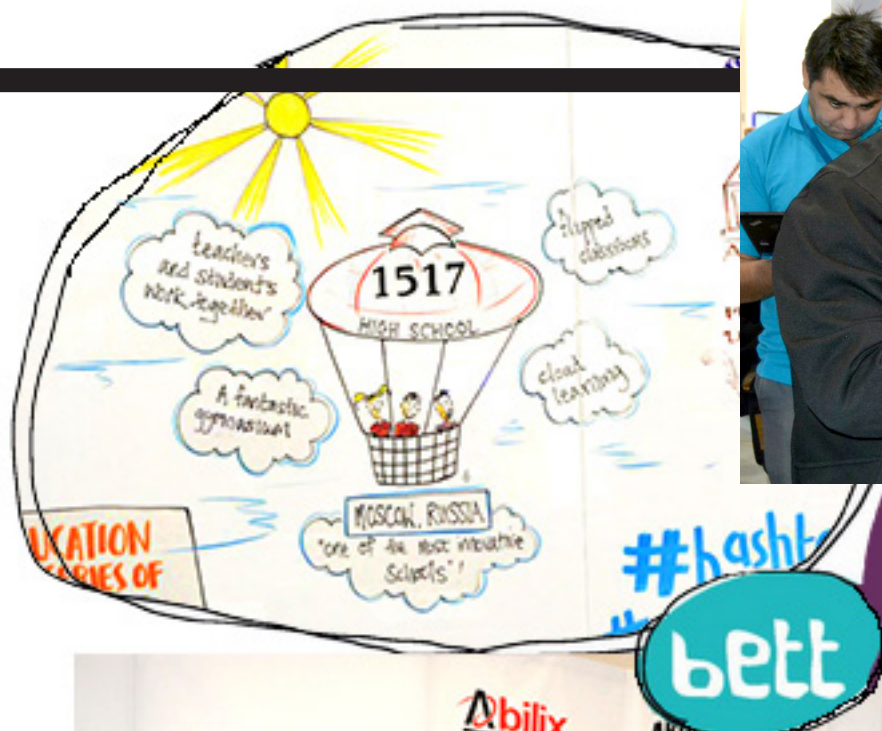


Consultants at the exhibition stands in interesting and accessible to children form told and showed what should be the School of the Future. The basic idea – every student can use the device that seems to him the most convenient. No matter what it is: smartphone, tablet, or panel, directly integrated in the Desk. Very clearly we were shown as any surface in the School of the Future can be a digital space for learning. Though last year the exhibition featured a lot of cloud technologies for educational process, in 2014 the majority were responsive images and surfaces. The students tried touch screens, touch screens, interactive tables, 3D holographic projectors, displays with haptic technology and many other modern developments.



The exhibition was held on January 22 -25, 2014 in the exhibition center – London Excel. it was divided into special thematic zones, in which visitors could get acquainted with the latest innovations in IT-technologies in education, such as cloud models, modern remote technologies, special educational computer programs and etc. , to learn what innovations can improve and increase the level of education from pre-primary to higher education and improve their qualifications.





The students were not ordinary visitors of the exhibition. Each participant had several tasks. They were supposed to present a gymnasium scientific journal «HIGGS BOSON» (especially for BETT was made the exhibition issue in English) and invite stakeholders to the Conference «SCIENTIA UNESCAMUS».

I think that such exhibitions must be attended by the children – they intuitively, quickly and accurately grasp the latest trends in training, see the challenges and opportunities of a good education. And education in our society of new technologies – the shortest path to success and fulfillment.



The students and teachers become participants in several interesting activities on the BETT. Our delegation watched the presentation made by the pupils of a school from Leeds. After the presentation, the pupils of an English school answered the questions asked by our students.



BETT 2015

Egor Lopatin



The British Educational Training and Technology show was established in 1985 in London and held annually in ExCel exhibition centre in London. Nowadays we can't imagine the market of educative technologies without BETT Show. Its contribution into the sphere of education with finest technologies and bringing up students with education without any borders is insane. Its purpose coverage is huge – helping people to be in touch with new technologies, helping companies to present their products in a smartest way – that is great! As I said previously, the conduction of BETT is a greatest thing in order to make humans smarter, technology-orientated and to see the future just in front of you. The show has also expanded from being a purely technology show, and whilst it has played host to companies ranging from multinational Microsoft, Google and Apple inc. to small single-product firms, it has also created themed zones for exhibitors, such as those specialising in SEN provision. The attending of BETT 2015 was my first time here and I

was fascinated by the amount of interesting exhibition content and, definitely, by the exhibitors. This was a great experience of talking with nice people coming here to BETT. Continuing my walk through the dizzying array of exhibitors, I could see the specializing of this exhibition-classroom assessment, complicated student management programs and, of course, the opportunities of the inclusive education – “The education without any borders”. The ubiquitous range of companies and firms presented on BETT gave us a great possibility to see the whole market just step by step: from repairing computers and cases for your ipads to really complicated classroom assessment and student management programs – I considered myself that I must return here next year to see the new changes in the market of educational technologies, and to get some ideas that would inspire us to have an aspiration to make the world, so the education, better. Then, after a few days visiting it, I realized that everyone can actually live here-everything



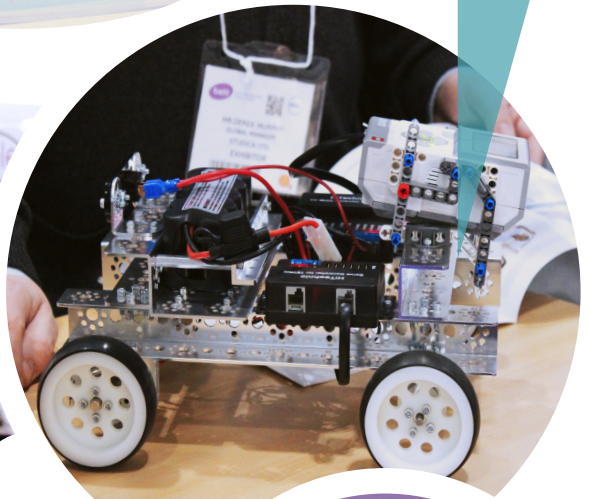
you need is here. That strongly confirms the main point of the event "Future is here". By the way, after 3 days 4-5 hours each I even haven't been to all zones and areas prepared for visitors by the organizing committee of BETT – i2i events group. The main place in the ExCel hall was BETT-Arena – the place where people get inspiration, chat to each other about solving out problems of the international and worldwide education. On the Arena a really big amount of speakers were people, whom was really interesting to listen to. The Wikipedia founder was there! His speech about the importance of new technologies was exciting! It

was also really nice to observe the fact, that companies, firms and people, participated BETT were from all around the world. BETT has no borders, education also. This is the most common aspect why more than 35,000 people from 113 countries all around the globe have chosen BETT. To conclude, I'm really happy to be part of BETT 2015 and looking forward to visit ExCeL in 2016!



BRING LEARNING TO LIFE

CLEANER, GREENER
SOLUTIONS FOR EDUCATION



The BETT Show is an annual education exhibition, which takes place in London in ExCeL exhibition center. The main theme of this exhibition is using new

technologies in education process. Teachers and students of our school join it every year with a target of creating project works and improvement skills of cooperating with our foreign colleagues. Aside from visiting the exhibition, at a time of the trip to London, our delegation visits main cultural sites of the city, such as St. Paul's Cathedral, London Tower, London Eye, Westminster Abbey and the Parliament of United Kingdom. In 2016 year, High School 1517 made a trip the England again. This year, we also visited English school and communicated with its students and teachers.



EDUCATION

Comparative analysis of secondary education in England and Russia based on the examples of English International Bournemouth Collegiate School and Moscow Gymnasium #1517

Author:

Aleksandra Krivushkova

Last year I studied in English school and Russian gymnasium at the same time. I mentioned that there were some differences between learning strategies in these schools. I got interested in that educational theme, so I started to do an analysis of studying systems and that analysis became the main goal of my research.

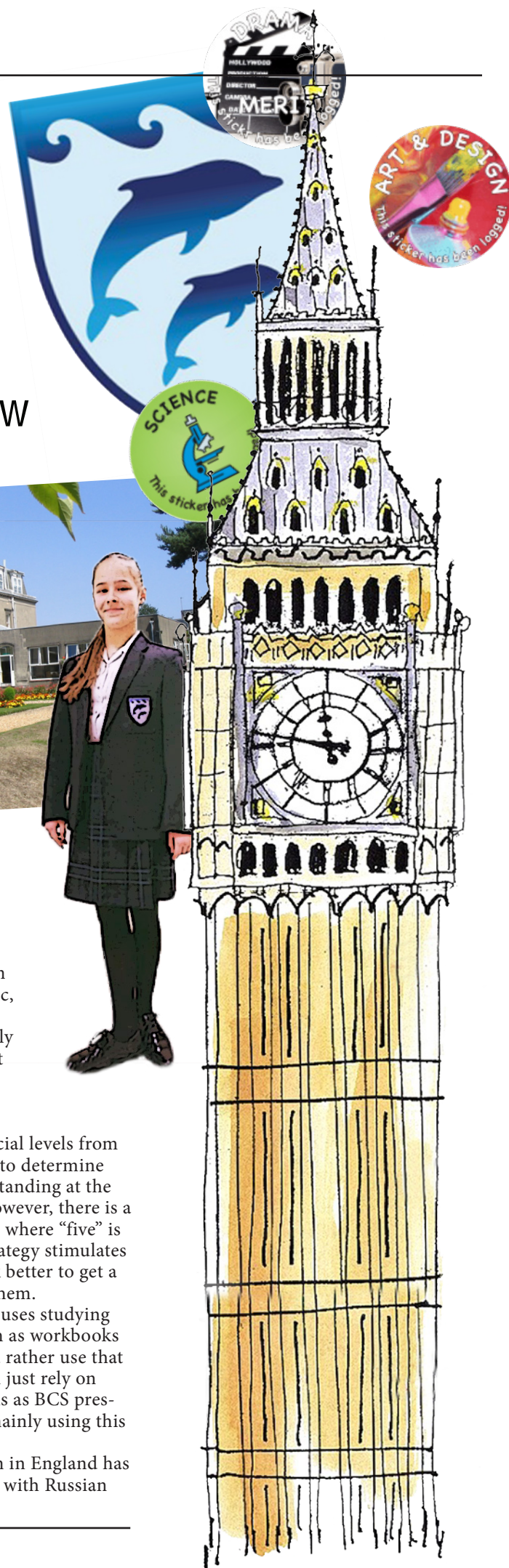
This research is relevant nowadays because the idea of getting education abroad becomes more and more popular in Russia. I think that it is very important to take into account all the distinctions between educational systems of different countries to get maximum from your school years and succeed in your future career.

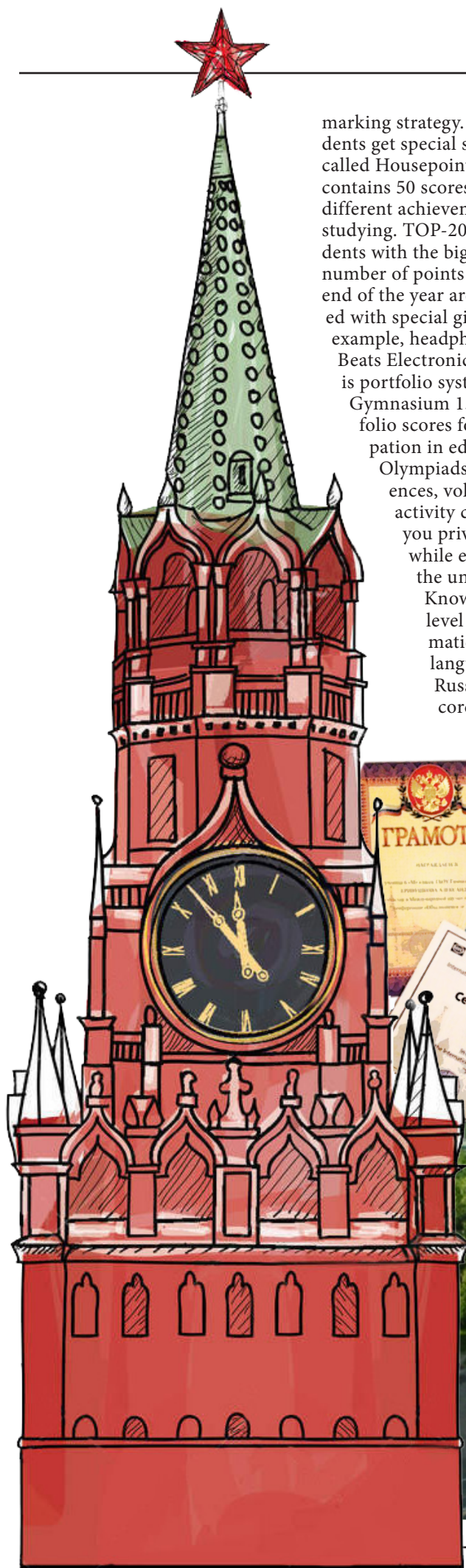
The result of the research shows that both Russian and English studying systems have advantages and drawbacks. BCS puts considerable effort into developing different areas of sport and art. Through the liberal studies and natural science school administration aims for an improvement in student's critical thinking skills. Gymnasium 1517 tries to bring up well-rounded generation with good skills in different areas including innovative technologies. Coalition of Russian school participates in conferences and competitions all over the world. Gymnasium is also an organizer of an International Conference „Scientia Unescamus“, which occurs every year in spring. During the Conference, students can introduce their projects to an interna-

tional public, compete with pupils in constructing robots and take part in a festival called “Gym-CinFest”. Students from the UK, Czech Republic, Romania, China and other countries annually participate in this great event.

The marking system of student's knowledge at BCS is based on special levels from one to ten, which help to determine a real degree of understanding at the particular moment. However, there is a score system in Russia, where “five” is the best mark. This strategy stimulates pupils to do their work better to get a mark, which satisfies them. Russian school mainly uses studying materials in paper such as workbooks and textbooks. I would rather use that paper-based book than just rely on electronic presentations as BCS presents the information mainly using this technology.

The stimulation system in England has something in common with Russian





marking strategy. Students get special stamps called Housepoints (each contains 50 scores) for different achievements in studying. TOP-20 students with the biggest number of points at the end of the year are awarded with special gifts, for example, headphones by Beats Electronics. There is portfolio system in Gymnasium 1517. Portfolio scores for participation in educational Olympiads, conferences, voluntary activity can give you privileges while entering the university. Knowledge level of mathematics and languages in Russia, according to a

survey done by the student from Gymnasium 1517, is better than in BCS. Statistics shows that educational methods in Russia influence students' intellectual activity more effectively. Different forms of giving a lesson have various goals of developing children's brains. Teachers of Gymnasium 1517 mostly use traditional combined lesson in order to explain material more efficiently. But there are also many other forms which suit particular studying situations. BCS tutors usually give debate-lessons and seminar-lessons. Moving to a day life in the school in general, the breakfast and lunch menu in Gymnasium 1517 is the same for everybody. BCS has "smorgasbord" system, which satisfies more students and teachers with different tastes.

Fur-

thermore, most pupils in Russia hardly ever eat in the school canteen. School uniform in BCS is a strict system. Everybody needs to wear exactly the same set of clothes every day. Russian school allows pupils to make their own choice, but you still need to follow a color style, which is dark-red (jacket) and black (skirt, trousers) in our Gymnasium. One of the most important advantages of Russian secondary education is that it is free for children of all the confessions, nations and levels of living. In BCS, you need to pay a lot for your education. Not everybody can afford it, but everybody wants to be intelligent and succeed in the future. In addition, Russian students are not allowed to study in budget schools of England, but only in private ones. The main result of my research is a model of a perfect school, which takes into account all the advantages of both BCS and Gymnasium 1517.



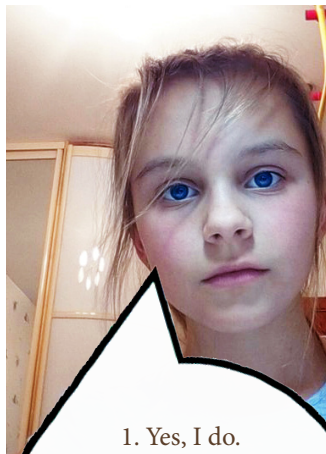
My BREAKFAST

ALYONA
ARESHEVA



1. Yes, of course.
2. I usually have some dairy products and a glass of juice for breakfast.
3. I think Greece breakfast is the best.
4. Maybe some cereals, fruits and a glass of orange juice.

POLINA
BONDAR



1. Yes, I do.
2. Buckwheat, cheesecakes and a cup of tea.
3. USA breakfast is the tastiest.
4. Pancakes with jam and juice.

ALYONA
SAMOYLOVA



1. Yes, I do.
2. Mum always cooks me some porridge.
3. Greece breakfast is the best.
4. A plate of fresh bilberry, banana juice and a sandwich with sausage.

MAXIM
SOLOVIEV



1. Yes, I have.
2. Usually I have porridge or fried eggs for breakfast.
3. I think, greek food is the best.
4. Pancakes with bananas, I think :)

?

KRISTINA MKRTCHYAN AND ANASTASIA MATVEEVA QUESTION:

Our parents tend to worry about what we eat at school. Any student shall eat healthy food as it will affect his health in the future. Students shall always eat enough and healthy. Thus, we wanted to explore the issue and asked students about their choices and preferences.

1. Do you have breakfast at home?
2. What do you eat for breakfast?
3. Choose any breakfast you like

(we offered 7 breakfasts from all over the world: Russia, UK, USA, Greece, Finland, Brazil and France)

4. Tell us about your dream breakfast.

7 BREAKFASTS:

1. Yes, of course.
2. Porridge with milk
3. Finland one is the best.
4. Pancakes with a cup of tea and a bag of nuts.



GEORGE
MASTEROV

1. Yes, I do.
2. Porridge and a cup of tea.
3. Finland, I think.
4. Fruit dessert, two tangerins and marshmallow.



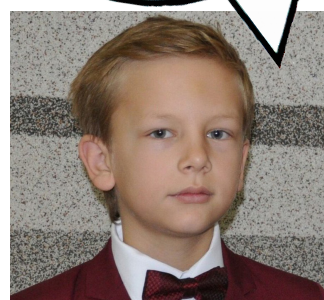
MARINA
PAVLUSHINA

1. Yes, I do.
2. Porridge, a cup of coffee.
3. Greece breakfast is the best.
4. Some porridge, baked goods, cheese and a cup of cocoa.



OLGA
KIRGAEVA

1. Yes, I do.
2. Two pots of yoghurt.
3. Russian breakfast is the best.
4. Lobster; fish Fugue, soft Mohito, tiramisu, chocolate fountain, ham, a glass of Sprite with ice.



SEMEN
IGNATOV

Baked chicken over orzo, stuffed grape leaves, tomato and cucumber salad, fresh oranges, and Greek yogurt with pomegranate seeds



GREECE

Pea soup, beet salad, carrot salad, bread and pannakkau (dessert pancake) with fresh berries



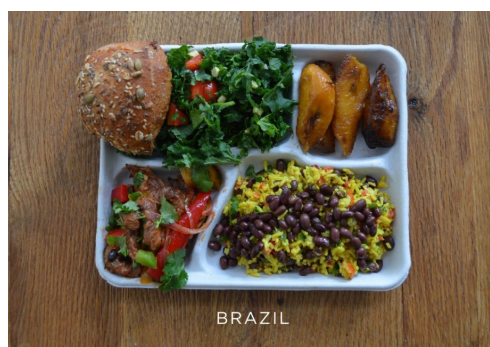
FINLAND

Rice with peas, sprouts and a yogurt with strawberries and berries

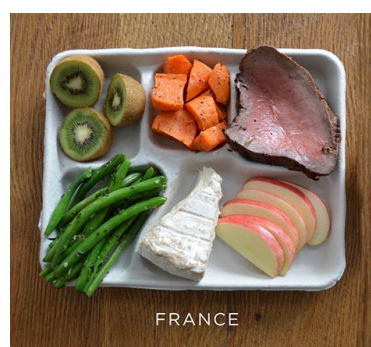


UK

Russia: bread, cabbage and cucumber salad, noodle soup, mashed potatoes and meatballs with gravy, juice, apple and cookies



BRAZIL



FRANCE



USA

Pork with mixed veggies, black beans and rice, salad, bread and baked plantains

Steak, carrots, green beans, cheese and fresh fruit

Fried "popcorn" chicken, mashed potatoes, peas, fruit cup and a chocolate chip cookie



PERSON

Sam has extensive experience driving international expansion, particularly in the United States, and has a strong track record in the technology sector. As a parent himself, and his wife a teacher, Sam is familiar with Impero's flagship product Education Pro, and has innovative plans for the direction of the development roadmap.

Sam comments "I know first-hand just how tough it is to set up and establish a new company, and I would personally like to pay kudos to Jon for doing so. The extended team and I are passionate about doing a great job as we move out of our start-up phase and look to solidify Impero as a world leader in EdTech software."

From www.imperosoftware.com



PROGRAMMING

Power at Your Fingertips

In this Interview, which was taken at BETT-2016, you get the opportunity to take a look into education-in-commerce, see the future today, and learn the way to start a company which will be efficient for 100%. I hope that you'll enjoy my conversation with Sam Pemberton, CEO of leading educational-software company in the UK – Impero Software, inc.

By Egor Lopatin

Egor Lopatin (E.L.): When I've come to Impero stand for the first time this year, I saw the slogan: "Life is a beach with Impero", so you, your company, had changed the marketing conception. What was the reason for it and how efficient is it currently as you see it here, on BETT-2016?

Sam Pemberton (S.P.): Yes, you are right, we had changed the marketing approach this time, last year one of the phrases we were using, was: "You've been Impero'd". What it referred to was the fact that we could prevent students from doing certain things and we could stop them, block them. And, actually, we didn't think that was the right way to go, we didn't think it was the best thing to do. Instead, we had chosen the way of working with students, to work with them, to help students to understand, what we were trying to do and why. So now, it is more about work with us – "Life is a beach", in other words, it is British colloquialism, which means "Everything is good".

E.L.: It's very nice when you are trying to make the great collaboration with

students! Which innovations have been implemented in the ImperoPro this year since we met at BETT-2015? I mean, what became better in hardware and software, new customers – the global network of customers?

S.P.: Yes, it is a good question! There is a whole raft of changes we made in the product, a lot of them are underneath the product, so the user doesn't know how to see them, but there are improvements in the speed of working, functionality underneath in the architecture. So, we are remodeling the product to make the working process stronger, ability to scale much more, we had also launched a lot of certain new features, here, at the Show we have the pen-group-in, which allows students to bring their own devices, so you could be in your classroom and your teacher couldn't allow you to use your own phone, iPad or whatever device rather than actually had not given to you your teacher at school. You could use your iPad in the classroom and you could join the Impero-conversation with your teacher and classmates.

E.L.: Sounds brilliant! I have a question about the Exhibition: Why do you, your company, choose BETT for presenting company and products? Is it easy way to improve the company, not large like Impero, but for Start-ups?

S.P.: I agree with you, there are a lot of different reasons why do we choose BETT. First of all, there are a lot of our apparent customers, we love meeting our apparent customers, hear their feedback on what we do, but sometimes we are not doing so well, so we know how to do it better. It also allows to show our current customers our latest diversion about software, but it (BETT, ex.) also allows us to meet with new customers and not just that: there are a lots of resellers, our potential resellers, lots of potential technology partners, for example – the stand right next to us is Microsoft where top-technology specialists work, so we work really closely with those guys and it allows to be close with, and, actually, be neighbors with them.

“ If you make something good, it doesn't matter how small you start ”

E.L.: So you have the greatest opportunity to be in touch with them, that is really nice. The next question is: What are the main educational trends presented this year on BETT-2016 from your point of view as a visitor of the Exhibition, a visitor, who, probably knows a bit more about educational world and innovations in it, I mean the global trends?

S.P.: Here, on BETT-2016, is the great amount of trends, there

is a proliferation of more different types of devices, so there are, you know, not just PC's from being a PC-dominating world in a classroom, in the school generally and even colleges having IOS devices, like iPads, iPhones, to Android devices, to Apple computers, MacBooks and so on. And the key thing is to be able to cooperate with all of those as a vender, as a technology company. We have to work with whatever our customers want to work, so that is a big commitment for company like us (Impero, ex.) to make transparency with people and to perform well on all of those platforms is a challenge, but it is also the one that we call relations – it keeps things interesting in the coding. But also, netbooks, as well, a raspberry pie. The barrier to entry, the pricing barrier to entry in terms of the global trend to get technology into children's hands is going lower and lower, and I think it couldn't be not a good thing, because the more children

Sometimes potential threats online are disguised, and students themselves don't see the risks. Active monitoring helps those in a safeguarding role to identify concerning digital behaviour, in real-time, and teach students to make good educated, responsible decisions.

Your school uses active monitoring system, Impero Education Pro to safeguard students in the online world.

impero

15-16 year olds

4.8 hours

spent online

Smartphones are the most common way of accessing the internet.



67% of young people own a tablet device.

Source: Childwise Monitor Report 2016

43% of teens have posted information online that they later regretted.



Three in four 12-15 year olds agree that most people behave differently online compared to face-to-face.

49% of 12-15 year olds believe they should be free to say and do what they want online.



Source: Ofcom Child and Parents: Media and Attitudes Report 2014

Young people are more likely to use the internet for entertainment.

Source: Internet Matters Pace of Change 2015



62%

Listening to music



61%

Watching video clips



54%

Playing games



use technology, the more students use technology – the more familiar they are with it globally and better we can do and more productive we can do, and we will end up with more and more progress.

E.L.: What do you think if the user, student, for example, being in comfortable conditions of using convenient technologies, loses the need to invent and create something new, new software, new programs and so on?

S.P.: I see, well, for us, because we have a strong technological background – we employ very-very high-qualified engineers and very good technologists, we are able to create something that big companies won't themselves be able to work with, and it hopefully will appeal to your teachers, students, to the leadership teams and others, so if you make something good, it doesn't matter how small you start, you can make it the greatest thing, and, you know, you will grow. So I founded a company in CA in 2001 and started out with just me and it became then 3 people and 5 people, and that sort of growth is normal and very powerful and there is no reason that small companies can not become big companies. We were a small company once, we are now medium-size company and, I think, we are



becoming a mid-size power player, if you like the comparison.

E.L.: Could you, please, tell our readers more about the Show (BETT-2016, ex.), your experience, etc.?

S.P.: What do I like about the Show, is meeting lots of new different people, lots of new customers, but also, it is an important way of finding what other companies are doing, and trying to sort out the trends, tendencies of 2016, what will be in 2017, and trying to engage, work out it with my staff, my exact leadership team. I think, one of the challenges of this particular show is that it is completely opened for public. And that is a really good thing: parents and students, and teachers come here, to the BETT. But it also means that it is very-very busy, and so we have lots and lots of staff, and, sometimes we have got queues of visitors, who want to see the demonstration of our products, and we don't like keeping people waiting. And it is important that we are doing a great job of hanging around innovative stuff and it is also very nice to see many people here!

E.L.: Thank you very much for your answers, Sam!

S.P.: It was really nice to talk to you, Egor!

We managed to contact the person who was working with mammoth DNA in Russia, senior researcher of Bioorganic chemistry institute of Russian Academy of Science, Vitalina Kirgizova. We asked her several questions

As I know you are planning to recreate mammoth. Is this truth?

For some period I worked in the Institute of General Genetics, where I worked with ancient DNA. It is a quite wide area of knowledge. It also includes the research of mammoth genetic material. DNA is a material inside the cell. It holds the genetic information that reconstructs the whole body. My laboratory has researched the mammoth material. Mammoth are extinct, but we still have their residuals and these hold the DNA. Working with DNA requires quite complex manipulations as DNA gets destroyed fast. Air contains oxidants and acids that destroys it. Now one of the tasks that faces humanity is to reconstruct the mammoth. There are several laboratories in the World that work with it.

What is this needed for?

Humanity is simply curious. Many animals

PERSON

Vitalina Kirgizova

- Senior researcher of Bioorganic chemistry institute of Russian Academy of Science
- Former worker of the Institute of General Genetics



GENETICS

Mammoths Resurrection

By Diana Chestnova

About 4,000 years ago, hunting by humans helped to drive woolly mammoths (*Mammuthus primigenius*) to extinction. CRISPR pioneer George Church at Harvard Medical School in Boston, Massachusetts, has attracted attention for his ambitious plan to undo the damage by using CRISPR to transform endangered Indian elephants into woolly mammoths — or at least cold-resistant elephants. The goal, he says, would be to release them into a reserve in Siberia, where they would have space to roam. The plan sounds wild — but efforts to make mammals more mammoth-like have been going on for a while. Last year, geneticist Vincent Lynch at the University of Chicago in Illinois showed that cells with the mammoth version of a gene for heat-sensing and hair growth could grow in low temperatures⁵, and mice with similar versions prefer the colder parts of a temperature-regulated cage⁶. Church says that he has edited about 14 such genes in elephant embryos.

are extinct now including due to human activity. And mammoth are cute and nice and there is a place for them to live. American scientists decided that it would be nice to restore them and send them to taiga. Russia by their understanding is taiga, Siberia and they are empty.



When will it happen? Soon?

Actually, we have collected enough material in order to restore mammoth, but this is not going to happen soon. We need biomaterial for it. The closest relatives of mammoth are the Indian elephants. It is necessary to make adjustments in DNA: introduce the cold resistance gene, make hair grow, red hair. Later work with the bones.

Why restoring mammoth? Why not the dinosaurs?

Dinosaurs disappeared very long ago

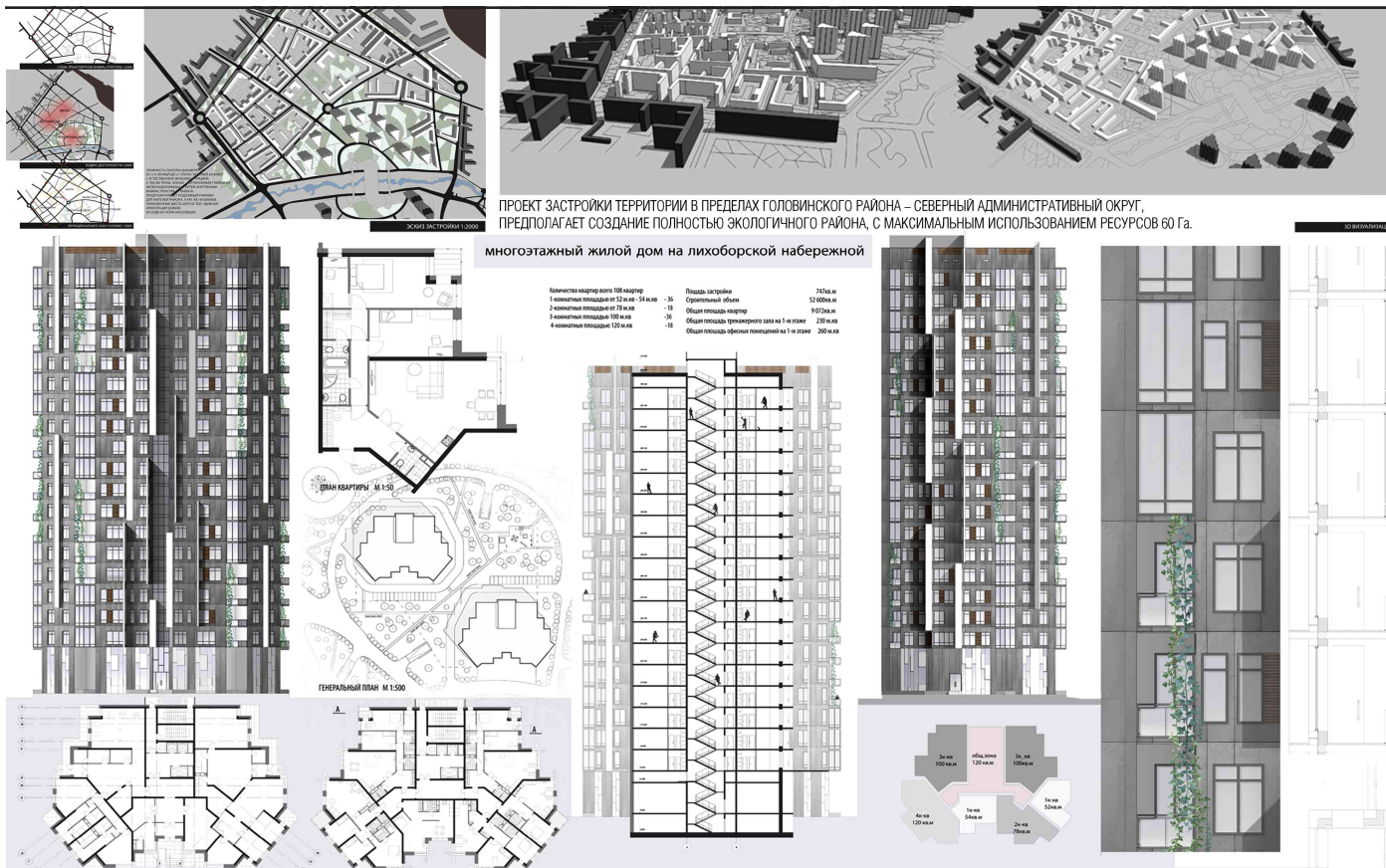
and it is tough to read the DNA.

What else will this method be applied for?

The method is used for many purposes. For example, for creation of mini and even micro pigs, which grow to maximum of 4 kilos.

Is it possible to create a hippogriff?

Yes, theoretically, in case the consequence of genes is known. It is important not to get involved in the construction of their body too much in order to create stable organism.



PERSON

Ekaterina Solovyova finished British International school in Moscow and got architectural master's degree in Moscow Architectural Institute (MARCH). Since 2009 to 2010 Ekaterina has overseen in the museum exhibition Higher Art Technical Studios and has worked on the design for anniversary album of architectural school Higher Art Technical Studios. Also Ekaterina has projected on the private orders like offices, flats and country low-rise houses. Since 2010 to 2014 Ekaterina has worked in Irish bureau of architecture KAD. In 2014 Ekaterina Solovyova created the company Architectonic, which projects flats, blocks of flats and low-rise houses.



ARCHITECTURE

From Exterior to Interior

By Maxim Solovyov

Hello. Tell me, who is an architect?

Hello! Profession of architect is respected by many people, because it gives us a chance to enjoy great buildings all around the world. Architect is a creator of different buildings: residential, public and industrial. Architect is a certainly creative person, but he must have mathematic and logic abilities, spatial thinking, good taste and perfect accurate eye. Architect needs patience, concentration and responsibility. This profession is very demanded.

How did you become an architect?

When I was a child I attended a lot of different interesting classes, for example – art school. When I was 13 I applied to the studio of Kirpichov

“EDAS” and there were kids of different ages including children from MARCH. They were telling us about their lessons there. It sounded so attractive and interesting to me. EDAS was something like my start of doing creativity. Then I finally realized who I want to become.

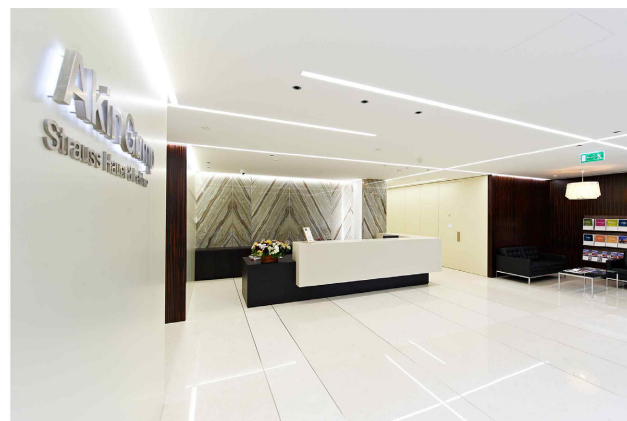
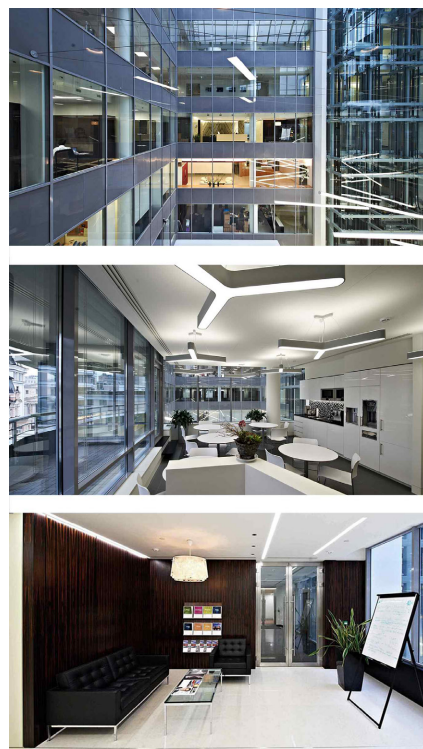
Do you always embody your idea into reality?

Speaking of Architecture, institute projects were left to live on paper, certainly. Some architectural projects were appeared into reality as it meant to be. I make lots of projects of residential flats and houses for now. And I can say that all the ideas we make with clients and builders together.

What is the most difficult part of your job?

When you love what you do there's nothing difficult in your job because you do everything with great pleasure. I get inspiration every time I start to make a new project, I enjoy communicating with my clients and it's interesting for me to find out how they want to see their houses in future. We always try to find a solution which is going to match my taste and my orderer's taste. It's very important to make a right plan and interior because I want my orderer to be happy. But the most important thing in my job is to create the place with the interior I have created with the soul and love and where my client always wants to come back to from work and trips.

Do you have competition with interior designers because there are a lot of them nowadays? How to interpret the thing that your client wants?



AKIN GUMP STRAUSS HAUER & FELD
CLIENT / КЛИЕНТ
Akin Gump Strauss Hauer & Feld, Moscow
LOCATION / МЕСТО
Geneva House Business Centre, Moscow
YEAR / ГОД 2011 SIZE / ПЛОЩАДЬ 2,040 sq meters
DETAILS / ДЕТАЛИ
Concept Design, Working Documentation and Site Monitoring

Екатерина принимала участие в разработке планировочных и интерьерных решений, а также 3D моделировании для корпоративных и захватывающих бюро Akin Gump Strauss Hauer & Feld в 2011 году. Теоретический и творческий сложный Concept Design требует углубленной детализации. Готовое пространство является прекрасным примером интеллектуального выбора материалов, при этом каждый материал и цвет имеет контрастное решение и со вкусом сочетается друг с другом. Каждый элемент имеет свое собственное пространство. Спроектированы и расположены особым способом для создания общего эстетичного интерьера.

Catherine was involved in designing corporate and arching office for Akin Gump Strauss Hauer & Feld in 2011. The imaginative and technically challenging Concept Design necessitated in-depth detailing. The finished space is a fine example of intelligent material selection, with each material and colour complementing or contrasting tastefully with its surroundings. Each element has its own space, planned and positioned to create an overall aesthetically pleasing interior.

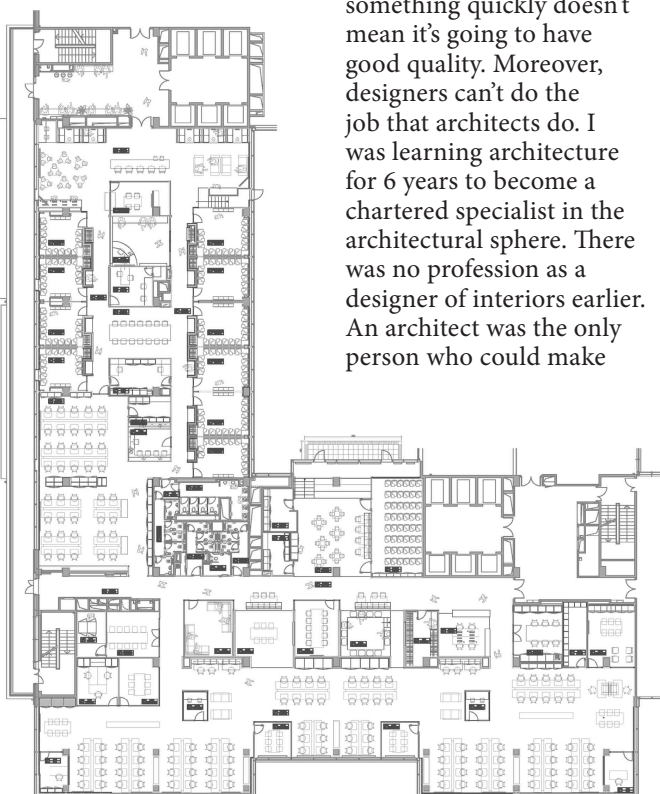
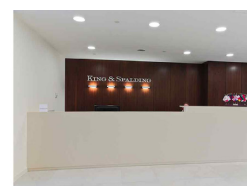
Definitely, there is so much competition in the architectural sphere of interior designs. There are a lot of quick courses of design and that's why every housewife thinks that she can be a designer of interiors. Making something quickly doesn't mean it's going to have good quality. Moreover, designers can't do the job that architects do. I was learning architecture for 6 years to become a chartered specialist in the architectural sphere. There was no profession as a designer of interiors earlier. An architect was the only person who could make

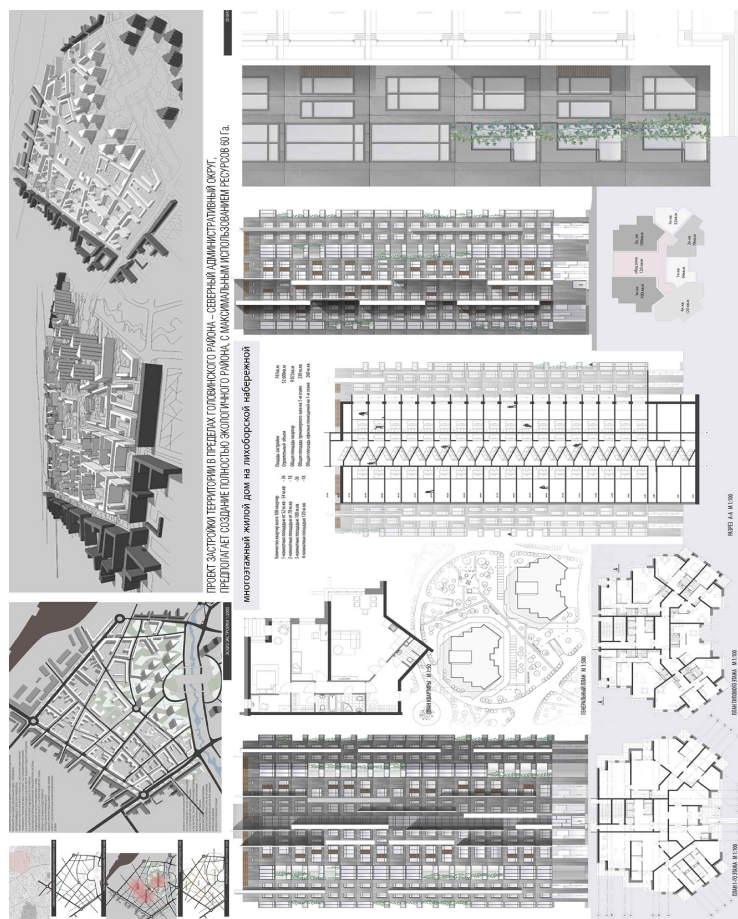


CLIENT / КЛИЕНТ
King & Spalding, Moscow
LOCATION / МЕСТО
Legend of Tsvetnoy, Moscow
YEAR / ГОД 2012 SIZE / ПЛОЩАДЬ 1,800 sq meters
DETAILS / ДЕТАЛИ
Concept Design and Working Documentation Review

King & Spalding является международной юридической фирмой, представляет широкий спектр клиентов, в том числе половина из Fortune Global 100. Новый Московский офис был завершен в мае 2011 года. Инновационный дизайн и новое рентабельное пространство офиса повышает эффективность и производительность и пойдет на пользу клиентам фирмы, а также ее сотрудникам.

King & Spalding is an international law firm that represents a broad array of clients, including half of the Fortune Global 100. The new Moscow office was completed in May 2011. The innovative design of King & Spalding's new cost effective office space promotes efficiency and productivity and will benefit the firms clients as well as its employees.





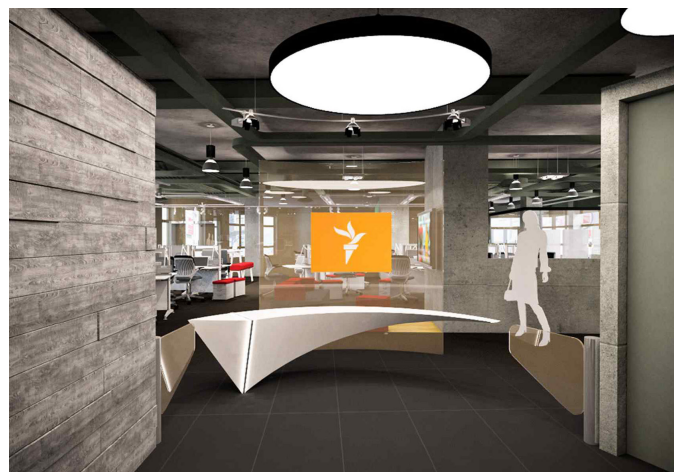
projects of houses from the beginning till the end: from exterior to interior. Sometimes it's easy to reveal the idea that my client wants because sometimes our tastes completely match. It happens that the client doesn't understand what style can be the best. This is not a problem because we always come to the solution. For example, the client wants to make minimalism but I find out that he also likes modern classic and Provence. All in all, my job is always fantastic.

Tell me about the most interesting and funny thing that you ever had in your job.

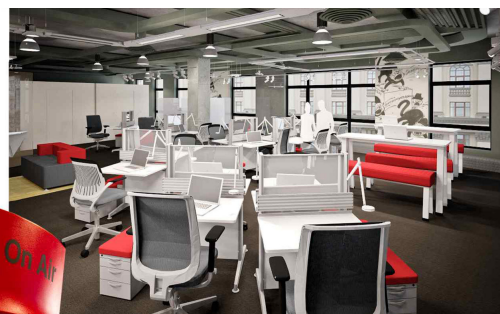
The most interesting things happen at a construction site. For example, somebody of builders can misunderstand the plan and everything can look wrong. The builders can stick wallpapers upside down or even lay the wrong tile in the kitchen. It was a really funny moment one day, when the client ordered a bed without telling me. In the end we found out that there is not enough space for the bed in the room. Actually, you should see positive in any situation because every question has an answer. Over time, I got my own builders and I honestly trust them. Whatever, such "interesting" moments don't happen anymore.

What style in architecture do you prefer?

I prefer constructivism in architecture. Functional minimalism in interior sometimes with elements of modern classic.

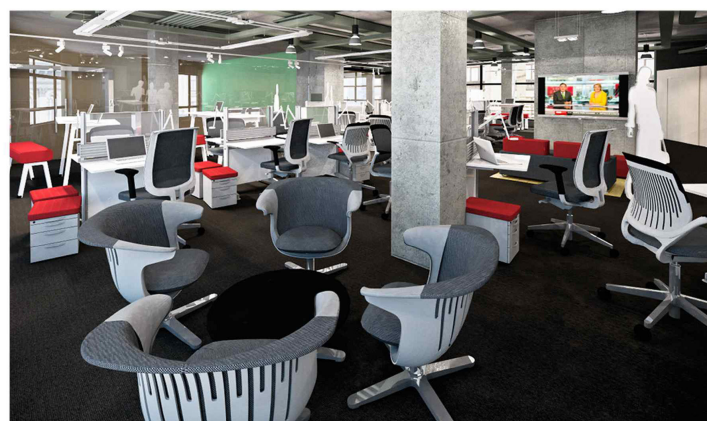
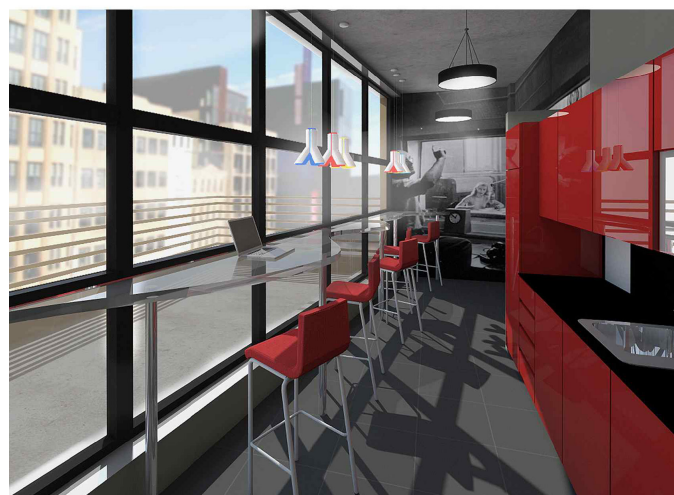


CLIENT / КЛИЕНТ
Radio Free Europe /
Radio Liberty, RFE/RL
LOCATION / МЕСТО
Moscow
YEAR / ГОД SIZE / РАЗМЕР
2012 700 sq meters
DETAILS / ДЕТАЛИ
Concept Design,
Working Documentation
Site Monitoring



Radio Free Europe open office in Moscow as the flagship of Prague headquarters. It should convey an atmosphere of creative and intelligent purpose, light, energy, sophistication and modernity. It should be a modern office, the look and feel should be clean and uncluttered with a maximum focus on flexibility, utility as well as comfort. Office is designed to inspire people working in it. That's why the whole atmosphere is modern and light with industrial cool look. Catherine was involved in producing design concept and working documentation.

Radio Free Europe открыли свое флагманское Пражское представительство в Москве. Задачей было сделать его как креативное, атмосферное и логичное пространство. Также добавить света, энергии, изысканность и современность. Это должен быть современный офис, его внешний вид максимально просторный и ясный, а также с большой гибкостью в передвижении и комфортом. Офис спроектирован для вдохновения сотрудников. Вот почему вся атмосфера такая современная и открытая. Екатерина участвовала в разработке дизайн концепции 3D моделировании и рабочей документации.





ECOLOGY

Ecological Action “Greenfingers”

Pavel Smirnov

The problem of environment safe – is one of the most actual world problems. In our everyday life, people are polluting the environment, without even noticing it. For example, it is car or random fallen wrapper.

In our modern world with developed technologies, everyone can help saving environment. At the Social Networks, it could be apost, a flash-mob, an action or a TV advertisement.

Not long ago, in Russia, WWF started ecologic action “Greenfingers”. The main idea of the “Greenfingers” is that every participant of this action paints his forefinger in green color, and then writes on his palm the name of the nature object, which he wants to protect. Then he takes a photo of his palm and shares it at the Social Networks.

We decided to help nature in our Gymnasium №1517 too. Every year, teachers and students participate in action, they take photos of their painted palms and share it at the Social Networks. Some people want to protect tigers, others – protect air, others – Baykal Lake.

This action lets attract preschool and school departments, and teachers to solve problems of saving ecologic objects. It helps educate a sense of the responsibility for the environment in children.





International Scientific and Practical Conference

The Conference is an inclusive event because it provides participation to the children with disabilities and special needs. The main targets of the Conference are to reveal and support talented students and youth and to draw attention to the development of intellectual potential of society.

Every year the Conference is attended by teachers, students, scientists and experts from Romania, Spain, the Netherlands, Abkhazia, China, Latvia, Kazakhstan, Great Britain, USA and other countries. Since 2012, in the activities of the Conference attended by more than 3 000 teachers, pupils, students, teachers and scientists.

One of the main objectives of the Conference is to create a joint international projects, cooperation and collaboration between teachers and students from different countries.

Preparation and holding of the Conference is performed by Moscow State Budgetary Educational Institution High School (Gymnasium) №1517 with the direct

Scientific Practical
Conference
"SCIENTIA
UNESCAMUS" is
a comprehensive
programme to
**support talented
students** and youth,
a form of interaction
of educational
establishments,
students, teachers
and scientists from
Russia and foreign
countries.

support of the Moscow Department for Education , as well as the sponsorship of companies Microsoft, Dell, CROC and many leading universities of Moscow. The program of the conference is also includes presentation of key reports, plenary and parallel sessions, holding creative workshops and studios, meetings and discussions.

Elena Davydova-Martynova



The Conference "SCIENTIA UNESCAMUS" held in Moscow every year since 2012. For all the period the Conference have been attended by students, teachers, professors and scientists from China, Turkey, Abkhazia, Romania, Spain, Latvia, Kazakhstan, Ukraine, Russia, etc.

Terms & Conditions

In order to attend Conference, you must fill out the registration form on <http://c.gym1517.ru/>. Please register by March 5, 2017.

Delegations of eight people (students and teachers) are invited to the Conference.

Participants of the Conference arrive on March 23, 2017 and depart on March 26-27, 2017. If you decide to arrive early or stay late, you will want to prepare yourself for the cost of food and shopping while in Moscow.

Transfer. For airport transportation, it is your responsibility to arrange and fund your own transportation – you can take Aeroexpress to the train station, where staff will be available to direct you to the Conference venue by public transport.

Arrangements. Children stay with our students' families. Teachers stay in a hotel near Conference venue for a reasonable price at their own expense. Teachers need to reserve their hotel accommodation. If you need any help arranging your accommodation you can contact Organizing Team for assistance.

Food provided during the Conference. We will be providing food on the following days and times. The other days/times you are on your own for food.

Friday, March 24

For students: Breakfast and dinner at the host families; lunch at the Conference venue

For teachers: lunch at the Conference venue

Saturday, March 25

For students: Breakfast and dinner at the host families; lunch at the Conference venue

For teachers: lunch at the Conference venue, Regional dinner.

Sunday, March 26

For students: Breakfast and dinner at the host families; tea party at the Conference venue

For teachers: tea party at the Conference venue

#unescamus1517



We invite you to participate in The V International Scientific and Practical Conference “SCIENTIA UNESCAMUS”, which will be held in Moscow, Russia, March 24-26, 2017.

More information and submit:
<http://c.gym1517.ru>

Main events:

- Contest of Scientific Research and Project Works
“SCIENTIA UNESCAMUS”
- Robotics Competition
- Festival of Children’s Short Film
“GymCinFes-1517”
- Professional development opportunities: workshops and training opportunities for teachers
- Educational tours (sightseeing tours, museums and theaters of Moscow)



Access to Big Science



OPEN
INNOVATIONS

MONTENEGRO

Kanli Kula Fortress

During my trip to Montenegro I visited Kanli-Kula fortress, the town of Herceg-Novi and I would like to write about it

Writer: Alena Aresheva

Translator: Yuri Konstantinov

The castle is very beautiful and has a rich history, which began long time ago. First information about the castle was found in 16th century, but later it turned out that the tower was built many years before the first mention. It was built when Turks occupied the town. Later the castle was rebuilt and restored many times. The castle is located on the outskirts of the town high on the mountain. Kanli-Kula in Turkish means "the bloody tower". Many years ago this castle was also a prison. It was at that time that the name «Bloody» appeared. At that time many murders were committed, and it was impossible to escape. Looking at the dungeon I understand that I would not like to be there. But now it has become a castle only attraction. The tower itself is very large. There are a huge number of stairs. Some of them lead directly to the tower, and some – in the city. There is a very beautiful view at the top of the castle.

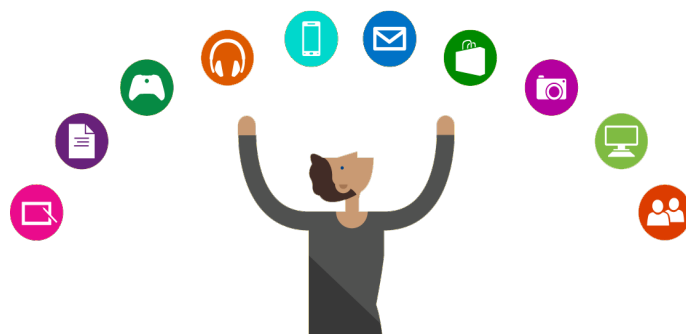
In 1996 the courtyard of the castle was converted into an amphitheatre. Now there are sessions of historical plays. There are a beautiful view of the amphitheater.

Under the castle you can see houses with their red roofs typical of the southern countries. If you look the other side, you will see the beautiful, majestic mountains. If you look the over side, you will see much grass and trees around the castle. Over the castle is flying the Montenegro flag – red flag with the golden national emblem. This emblem is very similar to the Russian.



EDUCATION

How to Use The Cloud Tools in a Big Modern School



Elena Davydova-Martynova

PhD, Head of Department of innovative educational projects

Maria Zyzyukova

Manager of international educational projects

gymnasium 1517: https://sway.com/s/xwwa85x_UkBMICT7/embed

One more example. Today we can find a lot of different MOOCs for various subjects. This autumn a new Russian platform Open education has started working. Our colleagues from all over the world say that their schools accept MOOCs as part of their educational programs.

In our school held t-MBA digital course. It is a personalized and gamified learning system created for students to learn economics, management, marketing etc. it consists of lectures, case studies, projects and tests.

During any MOOC students need to create learning pro-

Our High School is one of the biggest in Moscow – we have 16 campuses, 5000 students and 500 teachers. To manage educational process in such big school we use Microsoft tools: Office 365 as main administration and communication system. As well as One Note, Sway, MIX and etc.

Tools of Microsoft Office 365 in our system:

- desk of announcements and school news,
- tech support and outsourcing,
- corporate mail,
- bank of documents,
- inside the system exist profiles of school departments,
- also there is an opportunity for teachers to create a profile for work with students. And the main thing is students can put their works directly on teachers profile.

Also there are Links to all resources which we use. For High school website.

Between the main structural units of our High School 1517 there are departments of different subjects. Every year managers and teachers of the departments of our gymnasium create the Plan of the unit's work. In this plan they need to consider not only the inner gymnasium's events, but also educational events that happen outside our school.

Usually departments create their plans using programs Microsoft Word and Excel.

In the new academic year for cre-

ating the Plan a new Microsoft Sway technology was suggested to the departments. Opportunities of Sway simplified the work with the Plan. Sway provided shared access to the main document.

Apart from that, the using of Sway allowed to change from the still stereotyped form of the Plan to the dynamical, graphic and interactive format with a mass of multimedia features.

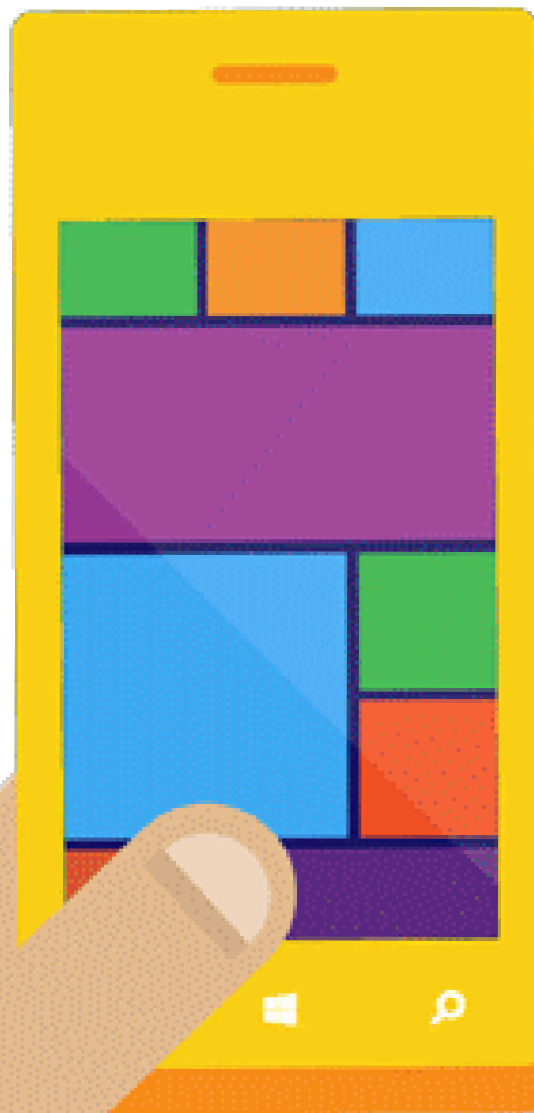
It is important to consider two more huge advantages: firstly, Sway allows the access from any device (your smartphone or tablet are always somewhere near you); secondly, the creation or change of the document using Sway saves a lot of time.

In our plans we started using not only tables, but also images. Moreover, Sway analyses the pictures' color and automatically installs design's color.

With Sway you can have amazing results even if you don't have deep knowledge of computer technologies.

Now instead of stereotypic tables the departments place on our gymnasium's information space an illustrative and dynamical working document with animation and interactive features.

This is an example of the work of the department of Innovative educational projects of the



jects and reports. Our suggest that they should use Sway.

Using sway allows our students to move to a dynamic, demonstrative and interactive design of their projects, with many multimedia materials. Important to take into account that firstly

You can use sway from any device you have – phone or tablet

Secondly making and editing a document in sway helps to save time which a lot of super busy students don't have. Students are able to create they homework projects and do it fast and efficient.

EXAMPLE

The Pedagogical Practice of Using Cloud Technologies by Microsoft Educator Expert Marina Klimenko (English Teacher, High School 1517)

I would like to tell you about the experience of organizing the International Olympiad with the help of cloud technologies.

Gymnasium 1517 has been taking part in the Olympiad of Informatics in Romania since 2012. Last year we met there the delegation of Italy who offered us to take part in the First International Informatics Olympiad in Teams. We were very happy to take part in it. As the work started every nation began making its own site. The sites are beautiful and informative BUT to make a site a person needs special skills in programming and a lot of time. And when lots of people are involved it is very uncomfortable to get and share information quickly. So I desperately needed some solution. We needed some space where we could be together being far from each other, where we could share materials and discuss urgent problems.

And we found it with the help of Cloud Technologies. With the help of OneNote.

OneNote gave us the opportunity to gather material in space with no need to go to three different sites to find something, to structure all the



information, to share all materials fast with one another.

In OneNote I created a book where we had different sections:

Rules and regulations where we all can always check on something. Tags help a lot to mark the most important points.

'To-do-list' tags help to keep mind in order.

Now we don't have to always keep the link to three sites to know the results of other teams. The results are always in our section results where we share them easily.

On the Forum teachers can discuss all possible questions, they share emotions when the round is over.

Our teacher of Informatics has also made additional OneNote for the students where they share ideas and discuss tasks, while getting ready for the Olympiad.

What makes OneNote even more comfortable to use and manage the organization of this event is the opportunity to use it on different devices. So even if I don't have my computer at hand, I can easily look it up on my phone.

So as you see OneNote made a difficult task easy.

With the help of OneNote you can easily organize any big event, even if the participants are far from each other and live in different countries. As OneNote is easy to organize, comfortable to work in, has enough information space, is convenient for communication, planning and feedback. OneNote is easy to get and navigate.

OneNote makes the organization of any international event easy, comfortable and pleasant!

TRAVELING WITH SKYPE-A-THON

We went to

- **India**
(Bangalore and Ghaziabad)
- **Lebanon** (Beirut)
- **Spain** (Valencia)
- **Cyprus** (Nicosia)
- **London** (UK)
- **Israel** (Tel Aviv)

Our students learnt a lot about traditions in these countries and told our new friends about Russia and symbols of our country. **Mystery Skype** is fascinating not only for children but also for teachers.

29-30 November 2016 we took part an international event **Skype-a-Thon**, where students and Teachers all over the world were able to communicate on any topic of interest to each other via **Skype Technologies**. Dating, virtual tours, joint projects, **Mystery Skype** that's just a partial list of the forms of communication. The main objective of **Shares** is the organization of long-term networking and cooperation.

WHAT AN AWESOME JOURNEY STUDENTS AND TEACHERS HAD IN THESE TWO DAYS!

THANK SKYPE-A-THON!

Egor Lopatin: Is there a problem in that the user being in comfortable conditions of using convenient technologies, tools, devices, loses the motivation to make something new and creative, the need to invent and create reduces?

Lisa Genberg: Why do you think programmer is considered a male profession?

Kirill Ushakov: What annoys you about nowadays society?

Sergey Shatrov: When I get older, I want to be a successful person like you. And I decided to start from scratch, so I wanna ask – what do you eat for breakfast?

Maxim Soloviev: Microsoft monitors popularity of its educational programs constantly. Which of all the programs are the most popular among users?

Maya Mamedova: What is your favorite song right now? Students from schools in Nicosia programmed a robot, that also asked Anthony.

In the end of our way we had an absolutely amazing meeting with Anthony Salsito.



Students asked Anthony questions. They were thinking about them the whole week. Such trips make education interesting and surprising. We travelled 19839 miles!



Thanks to our teachers! They are Microsoft Innovative Educators Experts: Marina Klimenko, Tatiana Nikitina, Svetlana Ivanova, Kseniya Belous, Ekaterina Pologih, Elena Davydova-Martynova, Peter Zhendarev and Mary Zyuzukova.

LEGO Mindstorms

Nikolai Nefedov

It's obvious that, each of you wanted to create something of your own after watching some sci-fi movie. But what? For example, a robot that will do homework for you. You've come up with the idea what it will do and then ... But you do not know from what? The answer is – Lego Mindstorms. I'll tell you five reasons to purchase Mindstorms.

Reason №1: It is very easy

Unlike conventional robots, where you have to solder contacts, transistors, resistors, the Mindstorms can be constructed as a usual Lego!

Reason №2: Different

Once you are able to build the robots from the instructions, you will be able to make a robot that you want to invent themselves. He can do whatever you want!

Reason №3: Popularity

There are a variety of projects from the Lego,

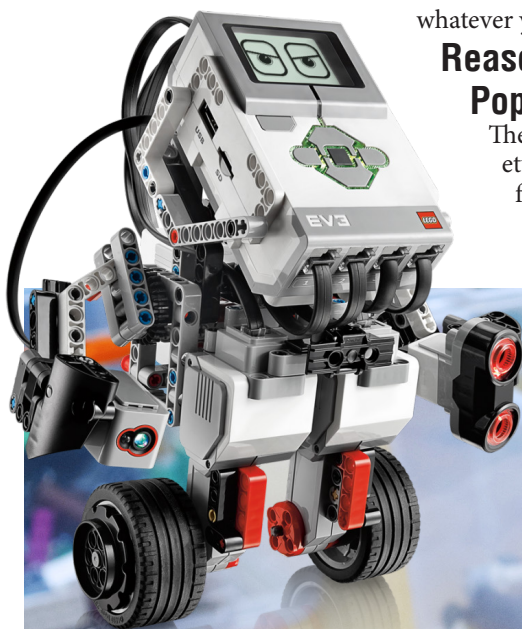
which are popular all over the world, there are also a lot of competitions with Lego Mindstorms. And maybe you go to one of them!

Reason №4: Help

The robot may assist in work. For example, a robot that will be able to assemble a Rubik's cube.

Reason №5: New friends

When you start making robots, you will have a lot of new friends! For example, I made 3 friends while working on my robot. In a word, I advise everyone to try to create a robot of your dreams!



TECHSUMMIT

17-18 OCTOBER/2016

SKYPE ONEDRIVE SHAREPOINT DELVE YAMMER AZURE MICROSOFT GRAPH API WINDOWS 10



PRAQUE



BIOLOGY

Cats

Cats are favorites for a lot of people. They are beautiful, cute, frisky, but also they can be brave, careful and redoubted!

Writer: Ekaterina Kozulina

Translator: Maya Mamedova

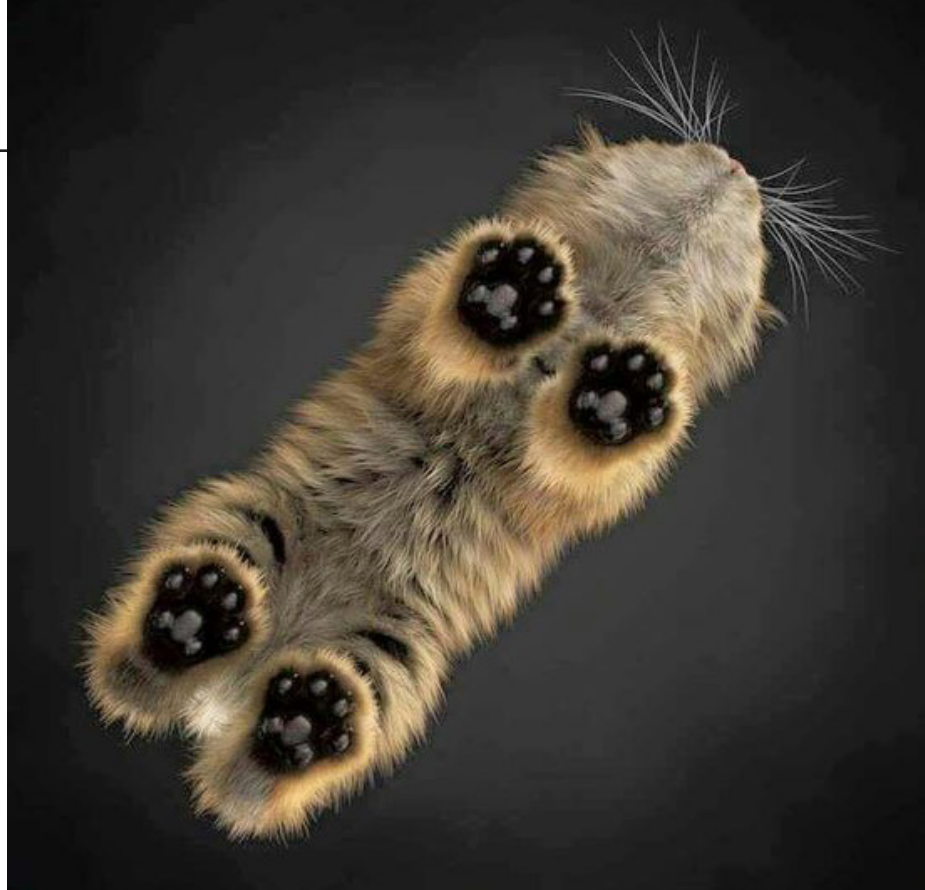
CATS AS HEROES

Story 1: One day, while a boy was riding on bike at backyard, a neighbor's dog came up and bit him and pulled him off his bike. The first to come to his rescue was the family cat, who body-slammed the dog. The boy was taken to hospital where he received ten stitches.

Story 2: The young family with children lived in house with their cat. One day, when kids have already fallen asleep and parents just prepared to. The cat thought that something wasn't OK, but nobody noticed it. A few hours later, the cat started loudly wailed and scratched the kitchen door. All family went outside from house. The parents phoned 911. Later, found that someone didn't turn off the gas-cooker. All survived.

CAT'S CARE

Once upon a time, the cat found the box with baby. It laid on him and warmed him up. Cat also meowed to get the attention of someone who could help. One woman found them. The baby was immediately brought to hospital. He didn't freeze and it was such a surprise for doctors. It was a proof, that not only people can be heroes.



BURGLARS

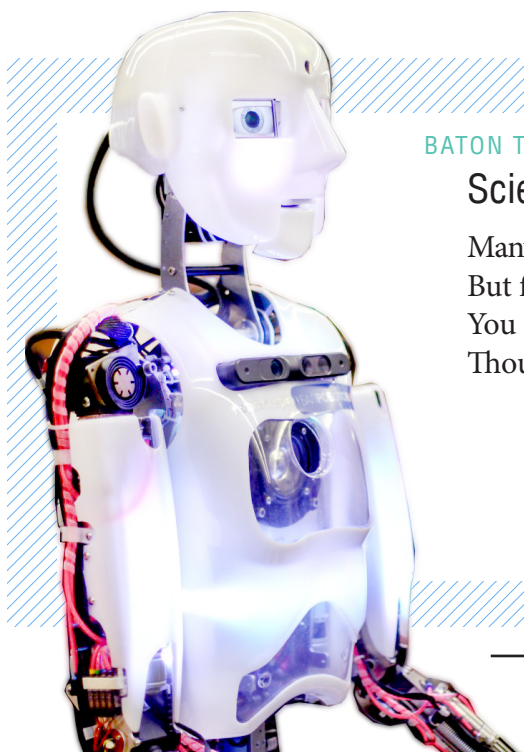
A lot of people know theory, that not human rules the cat, but the cat rules the human. Sounds redoubted, isn't it? Cats can be very aggressive. They have claws, teeth and can use it like a weapon. Don't believe me? Well, I tell you a story...

One day, the burglar decided to rob one pensioner. When he got into the house and was starting look for money, pensioner noticed him and said, that he hadn't got money. The burglar got angry and started beat the pensioner. Suddenly, the pensioner's cat appeared. The cat scratched his face, bitted and wailing SO LAUDLY. While cat and burglar were fighting, pensioner phoned to police. So, «aggressive of cat» brought to pensioner chance to save a life.

SOME INTERESTING

At last, I want to tell you some interesting facts about our furry friends

1. The cat's hearing ability is better than our, because cat's ears consist of more than 30 muscles. Also they can turn their ear on 180°.
2. The print of cat's nose is unique.
3. In Ancient Egypt cat was a holy animal. If cat died, its owners will cut off their brows.
4. Have you ever noticed a cat's tail quivering when it is near you? This is an expression of love.
5. A cat will fall in a special order. First its head will rotate, the spine will twist and the back legs will align. The cat will then arch its back to reduce the impact of landing. This is why they can fall from great heights and not get hurt.
6. Cats can produce about 100 noises.



BATON TO LYRISTS

Science use always

Many people think, that science is boring
But from early morning,
You using a study,
Though it has no body.

When you ride on a horse
And when you measure the force,
Science always with you
You should find out something new.



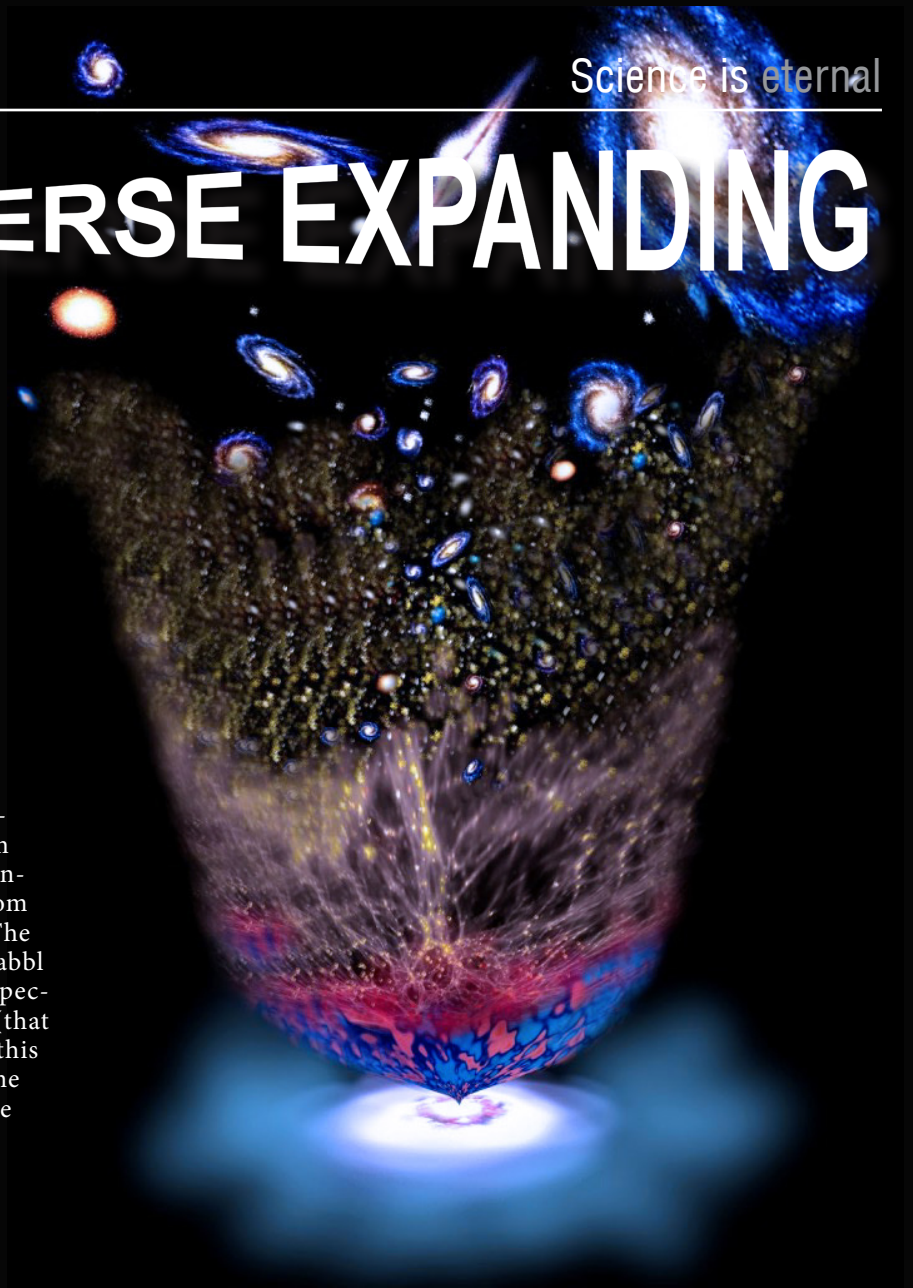
Ekaterina Morozova

PHYSICS AND HISTORY

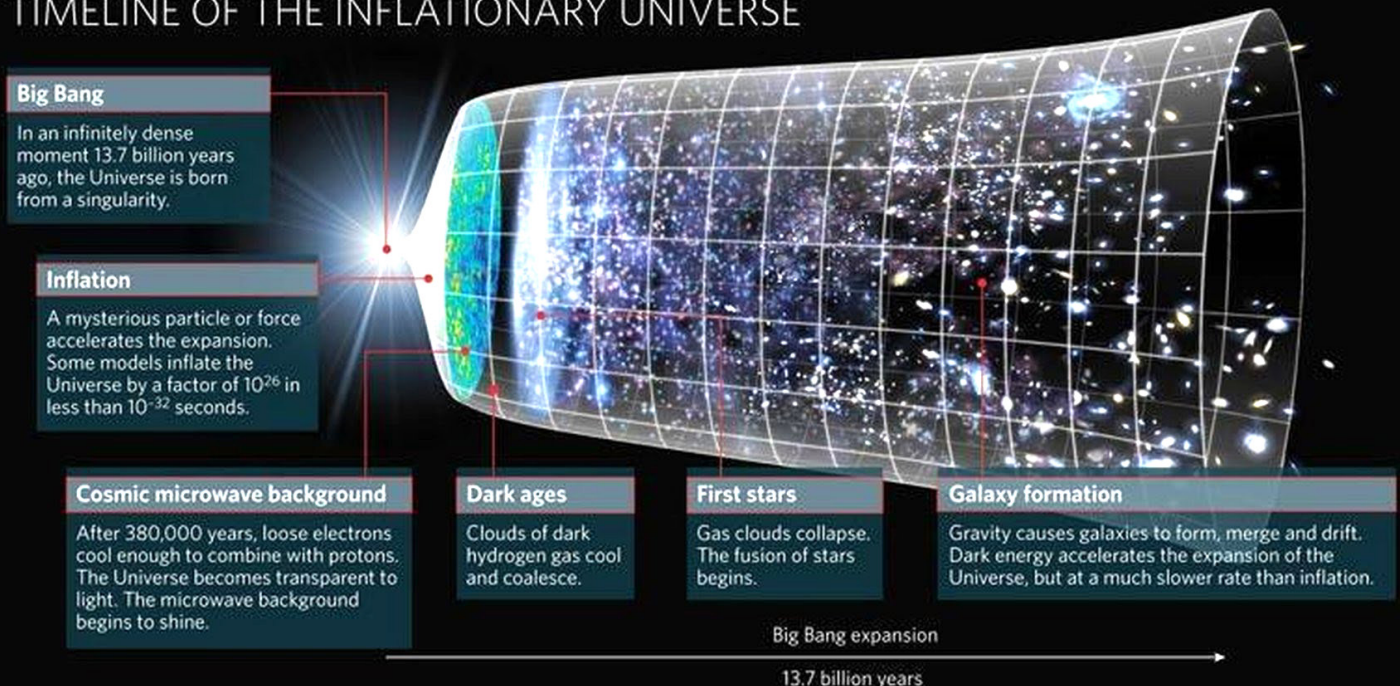
THE UNIVERSE EXPANDING

Vladislav Barsuk

The universe expanding the theory of relativity proved us that expanse expanding, peoples otherwise, all, in addition to Albert Einstein Bellow to learn all the mysteries of the universe, peoples required more powerful telescopes. Such telescope did Edvin Habb. It is named in honor of its inventor. Whith it is help made a lot of discoveries, about whom a lot of brilliant scientists. When astronomer Gersey did observations of the sky, he gathered a lot of ideas and submission about stars in different nebulas. Telescope Habb set, what galaxy removed from it na thousands and millions light years. scientists at that time knows, a beam of light from star can have got different light spector. The offset is just talking about light speed. Habb find, when he was measured universe, his spector always shifted in the direction red edge (that is star removed),so universe expanding. It his was expanding opening, so scientists came to the conclusion, the birth of the Universe was like disaster, and Stiven Hokking name it «Big explosion». It is theory it may be a precursor, and may be beginning now third revolution in the cosmological picture of the world.



TIMELINE OF THE INFLATIONARY UNIVERSE



Mystery of Shooting Modern Films

Julia Bogdanova
Maria Rusakova

«Green background»

Before the advent of modern technology directors were making films on «Life background», but were some problems: the weather was bad or was other inconvenience. Because this problems the shot was very long.

Today the modern films were shooting on movie pavilion. In this pavilion on background lay the green fabric. During shot a film actors were acting on this background. But when the film is edited on this background cameramen lay other pictures. This is cheaper and faster, than make a film on «life background».. During amateur shot make a film in quiet places and when the weather is good.

Make up and costumes:

If the actor needs make up then makeup artist this is done with cosmetics.

But if the actor needs put on the mask or helmet cameramen this is done with modern technology.

Sometimes an actor have the role, which he must wear special costumes. During shot the actor shows move like his character. Later, when a film is edited on actors' moves lay computer animation.

Special effects:

How are explosions, lightnings, tsunamis created in films? The specialists in visual effects work on special effects in films. They work with programs like «Maya 3D», «3DS Max», «Photoshop». When the film is edited the specialists have a hard lay work because they must do special effects very realistic so that nobody can see a fake.

But in all times what is important in films is good acting and an exciting plot!



Cinema Beginning

Michael Barantsev

Cinema – one of the most important opening in human life. With its help the person can imprint the important historical points and learn something new. What it began with?

Word meaning cinema – an industry of human activities which consists in creation of moving images. In the 15th century the Italian scientist Giovanni Di Fontana invented a lamp with transparent glass on which the drawing was applied. If to light such lamp, then on a wall to appear the drawing. In too time the scientist and the painter Leonardo Da Vinci decided to use instead of thin glass special reinforced glass – a lens. It is necessary in order that a flow light was correctly focused.

In the 19th century devices of optical illusions became more difficult, than earlier. In December, 1839 scientists Louis-Jacques Dager and Nisefor Nyeps declared emergence of the photo and in 1885 the Istman Walker Company company put on sale of a photo a negative in the form of a celluloid tape. In three years began to sell the first the camera. It was with use of flexible negative materials.

But brothers Lumiere began to shoot the first movies. They the first began to show to public movies. The very first movie was called "Arrival of the train to La Siot's station". In total brothers finished shooting 1800 pictures, but then they stopped shootings. They explained it with the fact that they can't compete with theatrical directors who were engaged in a new art form.

For brothers Lumiere began to create movies Georges Melies. IMany movies of Melies were created as theatrical scenes with special effects. He scripted.

But the first short films (1,5min) were generally documentary, but already the movie of brothers Lumiere "The Watered Polivalshchik" there were already lines of the comedy. But this cinema was "mute" i.e. had no sounds. In due time even Thomas Edison tried to make cinema with sounds, words, music, but failed. But his coauthor William Dixon began to claim that in 1889 he could create the kinetofonograf-device. It was the device which projected both a sound and the picture. Unfortunately, we can't know, the truth it or not since proofs of this fact don't exist. Two reasons were the main difficulties of creation of cinema with a sound: Difficulty of synchronization of video with a sound and insufficient loudness of sounds. To solve the first a problem, it is necessary that both the sound, and the image were written down on one carrier. But the second problem was solved only in 1912 when the cinema was so popular that the lack of a sound wasn't such big shortcoming. At last the patent for the invention was taken out in 1919, but film companies didn't pay attention to it. They were afraid of the fact that creation of movies will strongly rise in price. But after all in 1925 one company made up the mind to this risky step. It was the Warner brothers company. At that time it was on the verge of bankruptcy. After several sound pictures success came only with the movie "Singer of the Jazz" and its date of creation (1927) is considered birth date of sound cinema.



Science is Fashionable

Elizabeth Genberg

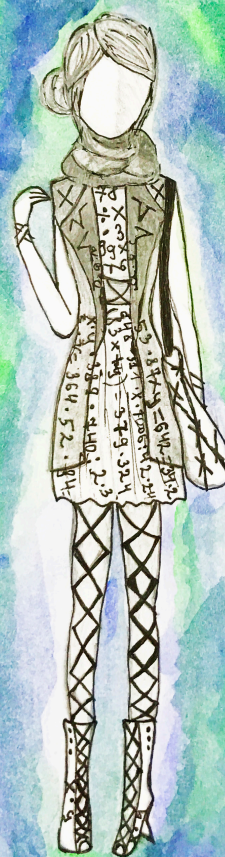
Many children and teenagers think that Science – it is tedious and boring, but actually, it is not. Let's think: after all that's great to understand that, what others do not understand, know what others don't know and can that others cannot. So, science it is opposite it is fashionable and interesting. So, science it's not just some strange numbers, formulas, equation. Science – it is that's all that surrounds us, Science – it is our world. So, do not be afraid seem others too many smart and try to get them and it be good for you, you will be interested in communicating, your self-esteem also increase among other people. I hope, that you agree, that Science it is fashionable and become excellent student, but so, you looked more fashionable externally, I present to you my fashion, you well look scientific and fashionable!



Illusion`s Riddles

Polina Kelzina

The illusions are very nice, unusual and interesting. I would like to draw my illusion and learn their secret. Illusion – is feelings` deception, caused by inexact picture. We often see normal things in the dark, but it seems like monsters. This is illusion. When we look at our reflection in the water we see it the crooked and false. This is illusion too. We see illusions every day! I visited the museum of illusions. I took a lot of photos there. Also I've tried to draw illusions. This is my picture. Sometimes illusions are fanny. I like illusions and I like to reveal their secrets and riddles.





Press Review of the Conference

We invite you to participate in The Fifth International Scientific and Practical Conference “SCIENTIA UNESCAMUS”, which will be held in *Moscow, Russia, March 24-26 2017*.

During the Conference two main events are organized:

- **Contest of Scientific Research and Project Works “SCIENTIA UNESCAMUS”**,
- **Cinema Festival of Children's Short Film “GymCinFes-1517”**

The main targets of the Conference are to reveal and support talented students and youth and to draw attention to the development of intellectual potential of society.

Scientific Practical Conference “SCIENTIA UNESCAMUS” is held once a year and is considered to be a comprehensive program to support talented students and youth, a form of interaction of educational establishments, students, teachers and scientists from Russia and foreign countries.

We will be happy to see your delegation at our Conference!

The program of the conference is also includes presentation of key reports, plenary and parallel sessions, holding creative workshops and studios, meetings and discussions.

Preparation and holding of the Conference is performed by Moscow State Budget Educational Establishment Gymnasium №1517.

For more information and submit: <http://conference.gym1517.ru>

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