



10 years

INversia

## INformation

## Joined electron-beam lithography

MIET has stepped into a joint electron-beam lithography project with Vistec Electron Beam GmbH. MIET, one of the most advanced Universities and research institutions in Russia and Vistec Electron Beam, a leading German supplier of electron-beam lithography systems will collaborate within a dedicated photomask manufacturing project recently kicked-off in Russia.

«After ramping up, the MIET Photomask Centre will provide both semiconductor industry as well as research institutes in Russia with advanced photomasks for a wide range of applications» said Vladimir Beshpalov, Senior Vice Rector of MIET. «Besides mask manufacturing, education and research will play a central role in the new Photomask Centre. MIET selected the Variable Shaped Beam system from Vistec because of the lithography performance, high flexibility, field proven reliability and simplicity of operation functionality of the system».

The 50kV Variable Shaped Beam system from Vistec is equipped with fully automated substrate handling and is prepared to expose different substrate types and sizes.

«We are extremely proud to team-up with MIET in this photomask manufacturing project» stated Wolfgang Dori, General Manager of Vistec Electron Beam GmbH. «The recently designed Variable Shaped Beam system represents a continuation of the outstanding business history the company has with Russia and opens up new and exciting opportunities in the emerging Russian market».

## Design Master Class

On the 19th of November at the Department of Graphic Design there was given a master class by the professor of Milanese Academy of Design «Domus» Federico Caravaggio concerning «The Strategies of the international design development».

The master class touched upon such topics as corporate strategy for the development of design, design as the key factor of the economic development, challenging usage of the up to date materials.

Federico Caravaggio is a well-known expert in the sphere of motorcycles' design. Over the recent decade he has been teaching and practicing not only in Milan, but also at the eastern branch of the «Domus» in Shanghai.

The tutors, the students of the Department of Graphic Design, the students



Photo by Yulia Yudova

of the technical MIET departments and the representatives of other universities were as well present at the lecture.

Later on the representatives of Ferrari multinational corporation made a presentation on the latest materials and technologies of the future concerned with developments and materials, which are produced by the company and are used in industry, architecture and other fields.

The company is working according to ISO 9001 quality standard and is extensively introducing manufacturing techniques for LCA materials. These trends appear to be the most promising in the European Union.

## Predictable success

- Dr. Goldman, what was the reason for Synopsys to start cooperation with MIET?

- In 2006, Synopsys CEO Aart de Geus visited Russia, and was impressed by the educational and research activities at MIET. This meeting resulted in a mutual agreement that Synopsys and MIET should cooperate. It is a natural cooperation between the Synopsys, the leader in Electronic Design Automation, and MIET, the leader in technical higher education in Russia.

- Which are the main stages and directions of MIET-Synopsys cooperation?

- The main area of MIET-Synopsys cooperation continues to be the Masters program in VLSI design that Synopsys sponsors at MIET. It is much more than just a sponsorship. Synopsys has established a computer lab at MIET, and provides our leading EDA software so each student has access to the same software that leading industrial companies such as Intel use to design their most advanced computer chips. Students study a world class curriculum developed by Synopsys, and taught in universities around the world. MIET faculty have travelled to our site for training in this curriculum, and we provide one of our best doctorate students to live in Zelenograd and help teach the curriculum. In addition, the head of our Education Department, Vazgen Melikyan travels to MIET at the end of each semester to assist. So far, we have graduated 2 classes totalling 38 students. Because of the great success of this program, and the closeness of our cooperation, we have recently decided to provide our new custom/analog tool, Custom Designer to MIET, the first university to receive this advanced software.

Many other areas of cooperation have grown out of this program. Synopsys supports the TCAD program taught at MIET, and provides the software needed for this program. We participate in MB-JASS, a joint school with Technical University of Munich, each time it is hosted by MIET. We organize

MIET collaborates with Synopsys, a world leader in electronic design automation, since 2006. In 2009 Synopsys Vice President Dr. Rich Goldman was elected the first honoured professor of MIET.



sessions, and provide lectures and students for the joint school. I have greatly enjoyed being able to provide lectures to the students during each of my visits to MIET, and it is an incredibly humbling honor to be chosen as MIET's first Honorary Professor. This summer, our Armenia Microelectronic Olympiads featured foreign students for the first time, and I am gratified to see that the MIET students who travelled to Armenia for this competition competed very successfully. It was a great pleasure to host these students in Yerevan. It's also always a pleasure to host Vice Rector Sergei Umnyashkin and Program Director Alla Mindeyeva, as they annually help us celebrate 'Synopsys Week in Armenia'.

Recently, our R&D group collaborated with the mask shop at Zelenograd Innovation Center to create curriculum on photolithography. MIET has been instrumental in introducing us to the organizers of the Zelenograd Free Economic Zone and the Innovation Center, and we look forward to

further collaboration as we continue to expand our presence in Russia. My greatest gratitude goes to Rector Yuri Chaplygin and to Vice Rector Sergei Umnyashkin for working with us so well to make all these programs possible and successful. They are always challenging us to take our cooperation to the next level, and bringing us ideas to do that. This year, Rector Chaplygin graciously agreed to be a member of the selection committee for the newly formed President of Armenia's Global Award for Contribution to Humanity Through IT.

How many Universities are involved in Synopsys university program in the former Soviet republics and around the world?

- 35 Universities are involved in Synopsys university program in the former Soviet republics - 27 in Russia and 8 more in the CIS, including 4 in Armenia. More than 900 Universities are involved in Synopsys university program around the world.

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## Rector's Address

## Dear students and teachers,

this issue of our University newspaper is made in the English language to draw your attention to the importance of studying foreign languages.



English helps to read up-to-date professional literature, to communicate with people from all around the world, to boost your academic mobility and therefore to get better knowledge and to improve professional skills.

Professionals in engineering and in most other fields are much more likely to get a higher paid job and to make a successful career if they know foreign languages.

So I wish you all the best in your studies of English as well as professional courses.

**MIET Rector,  
Corresponding member of  
the RAS,  
Doctor of Engineering  
Science,  
Professor Yuri Chaplygin**

## Congratulations

## Happy birthday to FL Department!

The 20th of November. It was an ordinary grey Friday morning. Nothing special was about it. Only students were going to the Institute, some of them reluctantly (as it was Friday), some - indifferently and others with joy (Friday it was, anyway!). But none of them knew that since the very morning the MIET's club had been full of life. As it was today, on the 20th of November, for the Department of Foreign Languages, one of the youngest MIET's departments, to celebrate its tenth anniversary. So that grey Friday morning promised to turn into in a very interesting and exciting evening.

Certainly everyone expected the festive concert to take place. It had happened, of course. But about it a bit later. Before the concert Yuri Chaplygin, the rector of MIET, congratulated Mary Evdokimova, the dean of the Depart-

ment of Foreign Languages, and her colleges with that special date having said a lot of warm words towards the department and wished further success in performing their professional activity. On this solemn note our dear teachers

joined their beloved students to see the surprise they had prepared for them.

It's not a secret that a major part of the «hnyaz» students are girls. So that beautiful part of the mankind has always attracted the audience by various dances and songs. But the anniversary was not an anniversary if our «charming cats» had been limited only by it. To the audience great surprise and excitement on the stage they saw belligerent Amazons. Their emergence was not accidental. Certainly, the concert itself has rather sophisticated plot aimed to rouse the audience curiosity. The girls had coped with the task perfectly. An attentive spectator was sure to trace two plot lines. The first line constituted the concert proper, that entertained the views with funny episodes from students' life, beautiful songs in various languages, dynamic dances and musical composition. At the same time the Amazons were searching for their abducted symbol - the black cat. As you can see on the stage there was a certain kind of detective. And the finale of that impressive show was a traditional hymn performed by the department graduates that made almost everyone feel that solemn and elevated atmosphere.



Photo by Vlad Kuznetsov

So girls, not without the help of the boys from other departments (special «thanks» to them), coped with the task gracefully. The anniversary turned out well. The day of the Department of Foreign Languages will be remembered not only by its participants and organizers, but by everyone who had decided to spend that grey autumn evening in the festive atmosphere of the MIET club.

~Humster~



Photo by Vlad Kuznetsov

## INFORMATION

## International Economics Seminar

On the 26-th and 27-th of October an international scientific seminar devoted to the 90-th anniversary of Professor Andrei Proskuryakov took place at MIET.

Professor Proskuryakov was the founder and the first chair holder of the Economics and Industrial Engineering chair (1970) and then founded Economics Department at MIET.



Photo by Yulia Yudova

Prof. Yuri Chaplygin, the Rector of MIET, opened the meeting and welcomed the guests. He also pointed out the significance of Proskuryakov's activity at MIET and wished all participants success in work.

Sergei Umnyashkin, the Vice Rector for International Affairs and IT, Yuri Aniskin, the Dean of the Economics, Management and Law Department, Nina Moiseeva, the head of the Marketing and Project Management chair, were also present at the opening ceremony of the seminar.

The main focus of the seminar was on the organization and economic problems of modern production in terms of economic globalization.

Among the participants of the seminar there were representatives of foreign Universities: Pavol Molnar from Slovakia, A.S. Mogidenko, Doctor of Economic Science at Riga Technical University (RTU), N. Latze, professor of RTU, T. Pylaeva, professor from Tallinn University of Technology, A.M. Temichev, the dean of the Marketing, Management and Entrepreneurship Department in Belorussian National Technical University and Zh. Smirnova from the University of Calabria, Italy.

Among the speakers there were also professors from leading Russian Universities.

## ACM Contest

The Quarterfinal of the ACM International Collegiate Programming Contest took place at Lomonosov Moscow State University on October 18-19, 2009.

'MIET#1' team was among the 8 leaders out of more than 70 competing teams from Moscow region as well as the representatives of MSU (3 teams), Moscow Institute of Physics and Technology (2 teams), State University - Higher School of Economics and Moscow Engineering Physics Institute.



After the Quarterfinal the organizers of the Championship granted 4 more teams from Moscow and Moscow region the right to take part in the Semifinal to be held in St.-Petersburg.

The team supervisor is Associate Professor of Data Processing and Computer Software Design chair Viktor Koldaev, PhD in Engineering Science.

## Interview

## Predictable success

Continued from Page 1

- Can you, please, estimate the professional skills of MIET-Synopsys educational program graduates?

- As I've mentioned, the students who graduate from the MIET-Synopsys program have undergone a world class curriculum in VLSI design, and have had access to world class tools, the same tools used by companies around the world like Intel to design their most advanced computer chips. I think it would be difficult to find graduates who are more prepared to contribute to the Russian semiconductor industry.

- Where do MIET-Synopsys graduates work? Are there many MIET graduates working for Synopsys?

- Opportunities for MIET-Synopsys graduates exist in Russia's semiconductor companies, like Angstrom and Mikron/Sitronics. It is our objective to train students who are ready to work for our customers like these, rather than to focus on training students for our own company. We want our graduates to contribute strongly to Russia's rebuilding semiconductor industry. We do hope to have more opportunity for our graduates at Synopsys in the future.

- What are your predictions on the nearest future of microelectronics and EDA after the end of the world economic crisis?

- The microelectronics/semiconductor industry is already recovering very strongly, well ahead of the world macroeconomy. Though the industry went through a difficult period with painful restructuring, the future is bright. This industry drives the technology revolution that is making all our lives better. We are barely at the beginning of this revolution, and as long as there is innovation in this world, the semiconductor industry will thrive. I predict that will last a long, long time. The EDA industry will thrive alongside the semiconductor industry, as EDA continues to provide innovative solutions to the challenges encountered by driving the technology ever harder, and I hope and expect that Synopsys will remain at the forefront in both technology and business.

- Any wishes to MIET students?

- To me, the most gratifying part about our cooperation with MIET is my interaction with the students, and to see their growth and success



Photo by Yulia Yudova

through the program. Our MIET students have proven to be an exceptional group, and I wish every one of them the best success in everything they do in life.

Please don't hesitate to connect with me personally. I want to know

how you are doing, and I'll be very happy to do what I can to help you meet your goals. My e-mail address is richg@synopsys.com and you can call me at +1-650-584-4264. All the best to all our students.

~Dmitri Kovalenko~

## Interview

## Study English now! It will pay back

International affairs are ment to be among the most important activity directions of every University. Our correspondent had a talk with MIET Vice Rector for International Affairs and IT, Professor Sergei Umnyashkin.

- What are the main directions of MIET international affairs?

- International affairs are part and parcel of the main activities which our university is famous for. These activities are education, research and innovations. It's like a pyramid; innovations grow up from research which is based on education. Let me describe our university international affairs through this scheme, starting with education.

To my mind, main efforts of international activities in developing and advancing education at our university should be focused on attracting world top technologies and experience to students training. At MIET it is implemented mainly in the form of educational centers organized jointly with world Hi-Tech leading companies such as Synopsys, Cadence, Mentor Graphics, Cisco, etc. Through these centers our students get access to advanced technologies and software, in most cases the curricula at the centers are developed together with the industry leaders. We try to attract foreign experts to lecture as well. For that purpose we organize seminars, student schools at MIET. For example, in March we hosted the 4th Moscow-Bavarian joint advanced student school (MB-JASS) where open lectures were delivered by industry experts and professors from Russia, Germany, the USA. Last year vice president of Siemens Russia Dr. Martin Gitsels, who permanently lives in Moscow, started an optional course on IT management for master students fully delivered in English. This course has already become part of the masters curricula at the department of Micro Devices and Technical Cybernetics, that is, the course will be listed in the attachment to the state master diploma to be issued on successful graduation of the university.

As far as research activity is concerned I would mention first of all wide and active participation of our scholars and young researchers in numerous international conferences, both in Russia and abroad. It's a pleasure for me to point out the fact that such conferences have become a custom at our university. Last year we hosted the 4th Russian-Bavarian conference on biomedical engineering which attracted more than 100 participants (about 30 of them came from Germany), this year we've had an international conference devoted

to the memory of Prof. A. Proskuryakov who was the founder of economics and management research and education at MIET. Apart from participation in international conferences our researchers visit foreign universities and Hi-Tech companies as well as receive foreign colleagues at MIET. A serious impact which fostered such contacts was made in 2006-2007 when our university was implementing the program which received state support under the national project Education.

International cooperation in the field of innovations comes from all mentioned above. The educational centers organized with foreign companies are becoming the points of growth for further research and innovations. For example, Cadence company which initially came to MIET to launch Cadence University edu-



Photo by Yulia Yudova

cational project set up a competence center in MIET innovation complex later. Many of the companies hosted at MIET innovation complex participate in international cooperation and there are a lot of success stories of such cooperation. Our graduates work for those companies and I believe that the experience our former students and PhD students got the international education centers at our university, participating in international student schools and scientific conferences have made a visible contribution to the success of the companies they are employed now.

- Is it possible for students to get a degree of a foreign university along with MIET degree?

- If I understand your question right we speak about so called double degree programs when part of the curriculum is implemented at one university and the other part is implemented at another partner university. The main problem here is caused by the state educational reforms under way now. We've been expecting new "third generation" federal educational standards which are laws for universities. It was declared by the state law that all entrants would follow only bachelor and master curricula starting from the next academic year, no specialist curricula and degree would be further supported for university newcomers. Now putting the law into practice is postponed for a year by new amendments, no new federal standards issued so far. Expecting changes in our university curricula we stay in uncertainty which embarrasses discussion with foreign universities on the possibility of setting up double diploma programs.

- Does MIET plan to attract more foreign students? From which countries?

- We are open to students from all countries. Unfortunately, so far we don't have a curriculum which is fully implemented in English. That limits the area of our foreign entrants to the countries of the former Soviet Union mainly. But even in those countries Russian is becoming less popular language. That is why we plan to develop courses in English, step by step. Another way of attracting foreign students who do not speak Russian is to extend the experience we've got with Myanmar students to students from other countries. All these issues are becoming more and more important; to coordinate the work on international education in July the Department of Foreign citizen education was established at MIET. Prof. Sergei Lupin was appointed the Dean of that Department. By the way, currently we have about 4% of foreign students in MIET which is not a small number.

- Every year MIET hosts Moscow-Bavarian Joint Advanced Students School. What are your expectations for the next MB-JASS?

- There were 4 such schools hosted in Zelenograd in 2006-2009. MIET organized these schools in partnership with the Technical University of Munich (TUM). Professors and students from Moscow, Bavarian, Belorussian, Armenian universities were the participants of the schools. For 2010, we agreed with the school director from TUM, Prof. Ernst W. Mayr, that we should try to organize next school in Bavaria. Unfortunately I cannot say it for sure because of the uncertainty we have now with the financial support. But hope that finally our efforts in organizing the 5th MB-JASS in Bavaria will do the things. We expect we will be able to rely on our sponsors which the organizers are grateful to (first of all Siemens) for the previous schools.

- What are the drawbacks of MIET international affairs? What shall be improved in the near future?

- I would say that the main problem is common language. English. Unfortunately not many of our professors have the command of English which is good enough to communicate with foreign colleagues. It's a common problem. Three years ago MIET started a special language program for the university staff and there is some progress. So things are improving. It's not easy to learn languages in your forties or fifties so I would like to appeal to students: do it now! It will pay back.

~Dmitri Kovalenko~

## Partners

## Siemens Corporate Technology in Russia: Driving the Innovations of Tomorrow

Innovations have been always one of the most important factors in Siemens' success. The main goal of the company is to stay a technological trendsetter in all the business fields in order to safeguard its competitive advantages for the customers in the future. Achieving this goal requires an optimal alignment of technology and patent strategies, innovation processes, the creative input of employees, and considerable investment in research and development. Siemens Corporate Technology (CT) department is a key element in this process.

CT is a Siemens central advanced development and applied research unit and plays an important role in Siemens innovation strategy. Beside implementing Siemens Chief Technology Officer (CTO) function and managing the patent portfolio of the company, CT researches and develops novel technologies in cooperation with Siemens sectors/divisions and partners from research institutes and universities. In the latter, CT mainly focuses on so-called multi-impact technologies, which are technologies that are of interest for more than one Siemens sector or division. CT research teams are now located in the world's most important technology strongholds: Germany, UK, US, China, India, Russia, Singapore and Japan.

Operation of CT unit has launched its activities in Russia in the beginning of 2005, with premises in Moscow and St. Petersburg. Today, CT employs around 50 people, with most of them being high-qualified engineers, natural scientists and mathematicians, with many holding doctoral degrees. The four departments of CT target advanced development and research issues in the areas of energy resources such as exploitation of oil and gas resources, energy conversion such as turbo machinery, design/optimization and processing of materials such as metals, alloys and polymers, preventive control and monitoring mechanisms in industrial automation, and reliable, safe software intensive systems.

The complexity of the technologies involved as well as Siemens global operations always required cooperation

with leading edge research institutes and universities in the area of research and development. CT is constantly broadening the company's cooperation network, initiating partnerships and joint research projects with top Russian universities and research institutes including the Lomonosov Moscow State University, Moscow Institute of Electronic Technologies, Saint-Petersburg State Polytechnical University, several institutions of the Russian Academy of Science and many others. In the frame of cooperation, CT is offering students to take part in its joint research projects and to apply classroom theory to real practical work. Staying at the forefront of latest scientific trends, CT also provides the students with a solid platform for writing diploma or PhD theses, stimulating the development of interdisciplinary approach to research.



In addition to participation in joint research projects, Siemens Russia provides students with an excellent opportunity for making an internship within a company. Siemens Trainee Program reveals career paths through practical learning experiences, depending on the area of interest and background of each student.

Dr. Martin Gitsels, Vice-President of Siemens LLC (Russian subsidiary of Siemens AG) and director of Siemens Corporate Technology department in Russia. Talking about trains, the Berlin Wall and foreign languages.

- We know that the Siemens has developed superfast trains called Sapsan. They will move between Moscow and St.Petersburg and the journey will take only 3 hours 45 min.

- You are right. Siemens has developed Sapsan specially for the Russian Railways. This is the first such like project in Russia and we consider it to be very successful. We have already made a so-called test-drive and soon our superfast train will "fly" between the "two capitals". Since the project is prosperous we are going to continue working in the field of railway transport.

- Recently the world celebrated the 20th Anniversary of the Fall of the Berlin Wall. Which role did the Fall play for you personally?

- The Fall of the Berlin Wall was important for Germany. I think that this division was a shame. That's why I was very glad that this boundary was destroyed. This is a very significant date in the history of Germany – one of the happiest days. At that time I lived in Western Berlin. I studied Informatics at the university. The Fall of the Berlin Wall was meaningful not only for Germany but also for all Europe. The world has changed completely. Germany has become "open" and there have appeared a lot of new opportunities for both parts. I am really happy that these barrier have disappeared. And we have become the citizens of one country.

- This is not the first time you visit MIET. Siemens has been cooperating with our university for quite a long period of time. Can you call this cooperation successful?

- Undoubtedly. We work together fruitfully. Siemens cooperates with the MIET, Bauman Moscow State Technical University and Technical University of Munich. I give lectures about Software Project Management for MIET students with pleasure. At the moment we are planning some concrete projects, for example in the area of biosensors. It's very interesting and perspective.

- You do lecturing in English. Which language do you prefer for work?

- English. It is an international language which helps people from different countries to communicate with each other. Siemens is an international company. It has a lot of employees in more than 190 different countries. For sure, the employees speak other languages as well, but English is preferable as international language.



- As you know there is a Department of Foreign Languages in MIET. This year it celebrates its 10th Anniversary. Would you like to wish something to our Department?

- My congratulations! I wish the Department effective work and a lot of motivated students. It's very good to have an opportunity to study not only foreign languages but also the history of other countries. The knowledge of languages boosts competitiveness in the labour market and simply makes life more interesting. It's great to travel around the globe and understand what people around you are talking about, isn't it?

- You mentioned that English is the main language for work. But students study German as well. Is it useful, in your opinion?

- Well, it depends on one's personal goals. If you, for example, are going to move to Germany and work there, then German is essential for you, but if you are going to work in some global foreign company here in Russia – you will mostly use English. Nevertheless, German skills can also be an advantage. Furthermore it's interesting to study history of Germany and its culture.

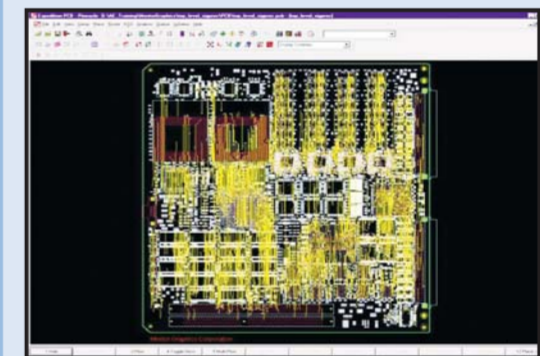
~Kate S. & Liuba L.~

## INTERESTING

### Mentor Graphics Expedition Enterprise

Designing a product requires more than just a great PCB layout tool – you need tightly integrated PCB design software. Expedition Enterprise provides this high level of integration, enabling all team members to work collaboratively and more efficiently.

Mentor Graphics Expedition™ Enterprise is a tightly integrated design environment, industry unique technology and its ability to meet the needs of mid-sized to large electronics companies really sets it apart from the competition. It features a common database and user interface, with rules that eliminate the burden of managing multiple tools to complete a design. Its electrical and manufacturing constraint management system, and design data and library management provides support for local or globally dispersed design teams to leverage their resources and reduce design cycle times. Data integrity is constantly maintained – from concept to manufacturing. Expedition Enterprise is integrated with DMS™ (Data Management System) and CES (Constraint Editing System), providing a central infrastructure for component libraries, design data versioning and management, design reuse, where used, entry and management of high speed and manufacturing rules, and integration with corporate PLM systems. Once the design is complete, integration with manufacturing output tools ensures that the integrity of the design is maintained.



While tight integration provides a seamless environment to support the PCB systems design team, Expedition Enterprise has extended beyond the classical definition of a PCB design solution and contains many industry-unique technologies.

These technologies address the most advanced business needs of an electronics company enabling the development team to deliver a more competitive product to market faster and at reduced cost. These unique technologies fall into three categories: concurrent (parallel vs. serial) product development processes; use and analysis of the most advanced IC and PCB fabrication technologies; and, collaboration between the PCB designer and other disciplines in the product development process.



Speaking about the cooperation between Mentor Graphics and Moscow Institute of Electronic Technology it is necessary to say that in the Center of Competence Forming «Microsystem technics and technology of electronic devices» (Microelectronics chair) there is an educational class formed by Russian distributor of Mentor Graphics – «Megratec».

This class provides training in Mentor Graphics products, including Expedition Enterprise. By the end of the trainings a certificate of completion is given. This gives the opportunity to get education in program products, which are now popular all over the world.

~Andrew Shalimov~

## International students

## All about myself

I am a Myanmar student, Aung Soe Lwin, who is attending the Doctorate Degree Program in Moscow Institute of Electronic Technology (MIET). I was born in Sagaing which is near Mandalay, third capital city of Myanmar and grew in a happy, warm and peaceful family. My family is not rich but I got everything I needed. I have very kind parents who made my childhood dreams come true and lots of siblings who always stand by me anytime anywhere.

I started attending the school at the age of 5 and finished it 11 years later. On the last year I had to take an entrance exam for attending the University, College, Institute or Academy. When I passed this exam I decided to attend the Defense Services Academy (DSA) which is the first military academy in South East Asia. I had to take another entrance examination for this program. For that entrance examination I made lots of preparation, because this exam tested not only our brain but also our general knowledge in every field. After passing exams from Officer Testing Team (OTT), I was admitted to DSA. My specialization was Computer Sciences. While I was studying there, I attended some conferences, read papers and did some experimental work. Since I was interested in my field, I could pay full attention to it and therefore was successful in my re-

search works. As I did my best in everything, after graduating from academy, I began to serve at a battalion so called mother unit. Having served at the battalion as an officer for 1 year I was chosen as a student to attend the Master Course at MIET.

My specialization is Technology of Navigation System. I attended this course for 3 years and got a degree of Master in Automation and Control System (MACS) and started to attend the Doctorate Degree Program here. I studied the technology of Navigation systems, Satellite systems, Global positioning system (GPS), GPS-Tracker, GSM antenna, WIFI antenna, 433MHz antenna, wireless system and PIC Microcontroller. For that work, I

had to read journals and articles on tracking technology systems written in English as well as in Russian. All these years I've been

## DELO

## Location

The Union of Myanmar is the largest country by geographical area in mainland Southeast Asia or Indochina. Myanmar is bordered on the north and north-east by China, on the east and south-east by Laos and Thailand, on the south by the Andaman Sea and the Bay of Bengal and on the west by Bangladesh and India.

## Total area

678,500 square kilometers, Myanmar is the largest country in mainland Southeast Asia, and the 40th-largest in the world.

## History

Until 1989 Myanmar was known under different names: Suvanabumi, Bermah, and Burma. It was well known for its ancient archaeology and rich culture.



## Religion

The main religions of the country are Buddhism (89.2%), Christianity (5.0%), Islam (3.8%), Hinduism (0.5%), Spiritualism (1.2%) and others (0.2%).

## Currency

Kyats. It is often abbreviated as «K», which is placed before the numerical value.

## Capital

Naypyidaw. «Nay pyi daw» means «Great City of the Sun», but is also translated as «abode of kings».

working under the supervision of Professor Anatoli Shchagin (head of Automatic Operation and Control Systems chair) who is a talented scientist and a very helpful teacher. He is always ready to help me with all aspects of my work (finding necessary literature, and publishing papers, starting research and experimental work). Being a student here is not such an easy thing. While I am learning here the thing that makes my life a bit unhappy and rather complicated is the language barrier. I have been learning it for almost 4 years now, but I haven't mastered it yet and it is still a big problem for me. It is a

great pity that so much valuable time was given to it and we will not use it anymore when we return to our country.

After I have successfully got the PhD in Russia I'm planning to continue the experimentation of my knowledge in my country and this will give lots of benefit for my country. Although I may face some difficulties I believe that nothing is impossible so I will implement my knowledge as much as I can. I will always be thankful to our lecturers who give us lots of knowledge and help. And our life in Russia will never be forgotten.

~Aung Soe Lwin~



Partners

# Close friends

Cadence Design Systems, Inc. was among the first foreign partners of our University. So let us introduce you a brief history of MIET – Cadence cooperation.

## 2002

Cadence Design Systems, Inc. president and CEO **Ray Bingham** headed a ribbon-cutting ceremony here Monday (Sept. 23) for a Cadence-sponsored training program at MIET. Bingham shared the stage with MIET rector **Yuri Chaplygin** and executives from the eastern European operations of IBM, Intel and Motorola.

«We are launching this training program because we see great potential in the electronics industry here, which is expected to grow about 20 percent a year,» said Bingham. «Russia has a deep pool of talented and dedicated young people ready to make their marks in the world of electronic design, and this program provides them with the latest tools and curriculum to prepare them for promising careers in their country's electronics industry.»

The International Institute of Device and System Design, begun earlier this year, develops curriculum for and teaches classes in analog/mixed-signal system-on-chip design for engineering graduate students at MIET.

«The program objective is to develop leading-edge design technologies in Russia,» said Dennis Schneider, director of the University Campus Program at Cadence (Arden Hills, Minn.), in a presentation at the annual SemiCIS symposium. «The program is to provide Russian IC design market with qualified specialists in key technology disciplines such as analog/mixed-signal and system-on-chip,» Schneider said.

Cadence donated 20 workstations, a couple of servers and the entire software suite for mixed-signal design to MIET, and is also paying instructor and student stipends to help MIET develop the curriculum. «This is the most complete educational/corporate program of its kind for Cadence worldwide, in scope and depth,» said Schneider. Cadence is contributing from \$1 million to \$3 million of hardware,

software and educational expenses to the program, he said.

## 2004

Cadence Design Systems, Inc. announced the opening of its first office in Moscow as the latest in a series of strategic investments by Cadence® in Russia. This is the first electronic design automation (EDA) research and development center opened in Russia by an overseas company.

The Cadence Moscow office is located at Bolshaya Ordynka st, 44, bld 4, 3-rd floor, 119017 Moscow.

## 2006

MIET selected Cadence as the sole provider of design technologies to help MIET develop the Russian electronics industry and provide local startup companies better access to the global industry. A broad range of Cadence technology – including the VCAD (virtual integrated CAD) service model and Cadence kits—will be deployed in a new project called «Inspire the Russian Innovation System», or IRIS.

The concept behind IRIS is to support the development of innovative startups in the field of microelectronics. MIET chose Cadence largely because of Cadence's flexible VCAD service model, which provides designers access to a broad range of Cadence resources and expertise and allows them to leverage Cadence's relationships with leading silicon design chain partners. Cadence technologies, reference flows and kits provide leading-edge design methodologies which enable companies to produce advanced microelectronic technologies and products.

«Cadence is the best choice for design tools and services to help us to develop the Russian market of components and electronic design to support the development of our startup centers,» said professor Yuri Chaplygin, corresponding member of the Russian Academy of Sciences. «The access to global partners participating in the Russian market is also very important for us.»

«We are very excited to take part in the IRIS project,» said Wolf-Ekkehard Matzke, fellow at Cadence Design Systems. «Flexi-



ble access to proven expertise is pivotal to bridge the knowledge-gap between EDA technology and design challenges. Russia's potential is high based on its young, talented, and scientifically well-educated engineering community. The IRIS concept is an excellent way to foster the ecosystem required to release this potential.»

## 2007

Cadence has opened its second office in Russia. The office is located in Zelenograd, which is recognized as the center of the Russian semiconductor industry with a rapidly growing number of startups. The office will serve as a center of excellence for Cadence virtual CAD services (VCAD).

«By opening an office in Zelenograd, Cadence is demonstrating its determination to be an integral part of our innovation ecosystem,» added **Gennadi Krasnikov**, general director of JSC 'Mikron', a leading Russian fab.

## We asked

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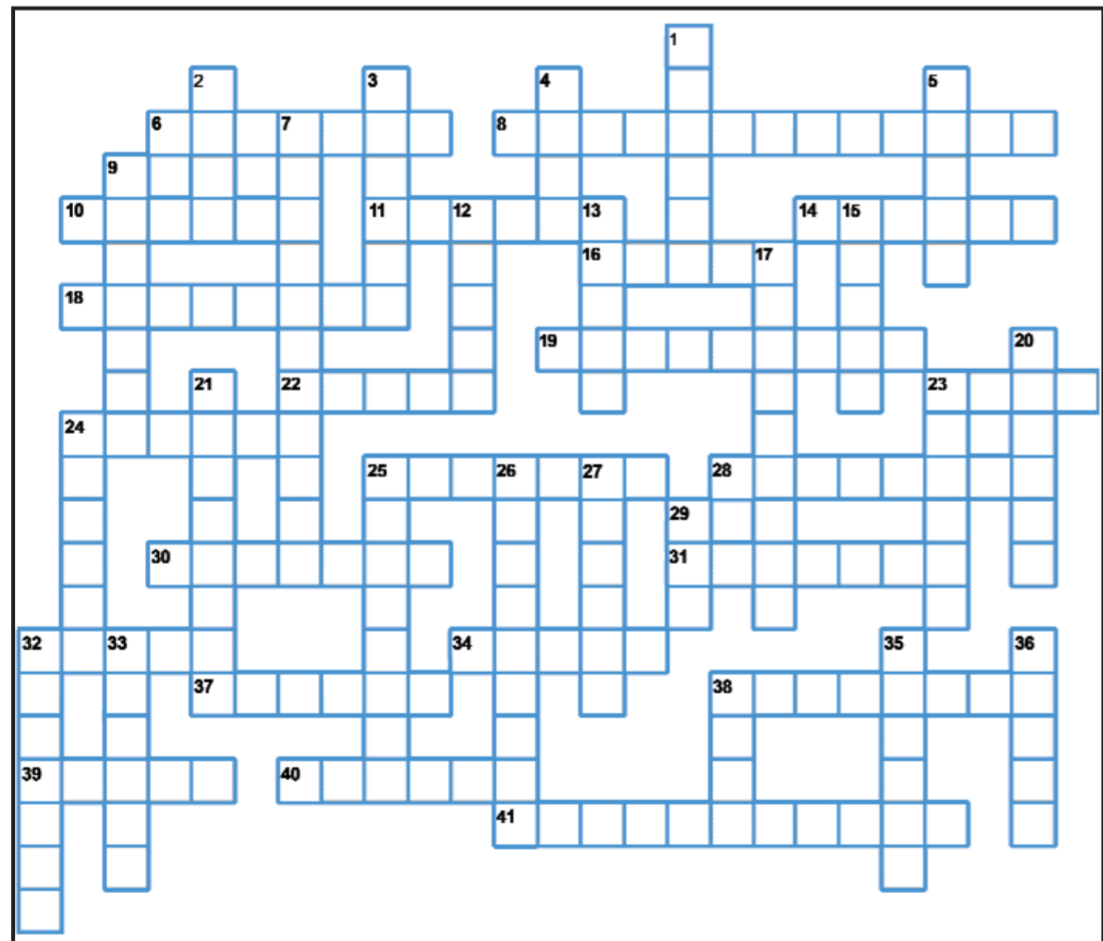
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## Crossword



### Down:

1. A just or dive as into water; 2. A list of the dishes to be served or available for a meal; 3. A list or program of things to be done or considered; 4. A solid figure with a point and a base in the shape of a circle or oval; 5. From then until now or between then and now; 7. The art or process of writing in shorthand; 9. Relating to the ocean; 12. The act, state, or quality of forming a whole from separate parts; 13. Any plant of the family Asteraceae (composites), having white, blue, purple, or pink daisy-like flowers; 15. Penetrating in perception or insight; 17. The aggregate fruit of any of these plants, consisting of many small, fleshy, usually red drupelets; 20. A large fortified building or

group of buildings with thick walls, usually dominating the surrounding country; 21. Symptom relating to a disease, condition, or characteristic that is not congenital but develops after birth.(adj); 23. Nimble with the hands or body; dexterous; 24. Feelings of great intensity and warmth; 25. Any of various systems of reckoning time in which the beginning, length, and divisions of a year are defined; 26. A situation in which further action is blocked; a deadlock; 27. Three times; 29. The grayish-white to black powdery residue left when something is burned; 32. Absence of any form of political authority; 33. A tapering spike of ice formed by the freezing of dripping or falling water; 35. Speak to rudely; offend; affront; 36. To refuse allegiance to and oppose by force an estab-

lished government or ruling authority; 38. The background of a design in lace.

### Across:

6. A usually short communication transmitted by words, signals, or other means from one person, station, or group to another; 8. The exchange of thoughts, messages, or information, as by speech, signals, writing, or behavior; 10. To charge with a shortcoming or error; 11. A feeling of sickness in the stomach characterized by an urge to vomit; 14. A person, animal, or object believed to bring good luck, especially one kept as the symbol of an organization such as a sports team; 16. To make a solemn promise; 18. A man who is amorously and gallantly attentive to women; 19. The condition or quality of being necessary; 22. To give an answer in speech or writing; 23. A glowing or charred piece of solid fuel; 24. In a christianity an acacia - mark of immortality and moral image of life; 25. An expression of strong disapproval or harsh criticism; 28. A garment, especially a robe or gown worn as an indication of office or state; 30. A vehicle consisting of a light frame mounted on two wire-spoked wheels one behind the other and having a seat, handlebars for steering, brakes, and two pedals or a small motor by which it is driven; 31. The outer or the topmost boundary of an object; 32. To get up, as from a sitting or prone position; rise; 34. A rod or branch serving as a roost for a bird; 37. A period of ten years; 38. A word or form belonging to the feminine gender; 39. To happen, come up, or show up again or repeatedly; 40. A narrow channel joining two larger bodies of water; 41. To an advanced or unusual degree; extremely.

## Poetry

### The love

Have you heard  
The voice of love?  
The sweet voice from above  
Have you heard?

Have you said?..  
Your emotions...Your feelings...  
The endings and the beginnings...  
Don't look so sad...

Have you ever felt  
The breath of spring  
And the whisper of wind  
And the ice does melt  
In your heart...

Have you felt  
The heart striking quickly  
And his eyes staring in yours  
And your eyes looking across  
And his hands touching yours weakly.

No words, no sounds...  
Only forest in darkness...  
Only moon above ground  
And your steps in the silence...

The moon, the forest, the night  
And the hands holding together  
And the endless flight...  
The cool autumn weather...

Do you have a right  
To feel so like?..

~V.A.~

## Humor

«So, Nik, how do you like your new mother?» – a newly remarried father asks his little son.

«You know, Daddy», – the boy replies sadly, – «I think they fooled us; she doesn't look new at all!»

Two fishes swim in Atlantics.  
Suddenly the great shadow covered them.

First fish: What a shadow! What can it be?

Second one: That's the bottom of «Queen Elizabeth».

First fish: God, save the king!

- How do you do!  
- Thanks. My do is well!

I have good news and bad news», the defense lawyer says to his client.  
- What's the bad news?  
The lawyer says:  
- Your blood matches the DNA found at the murder scene.

- Dammit! – cries the client, – What's the good news?  
- Well, – the lawyer says, – Your cholesterol is down to 140.

In the park, somewhere in London one gentleman sits on the grass, kissing younggirl. Policeman comes to them and says:

- Finish, guy!  
Gentleman answers with pride:  
- No, sir! I'm British!

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