

**MINISTRY OF EDUCATION AND SCIENCE OF REPUBLIC OF KAZAKHSTAN
SULEYMAN DEMIREL UNIVERSITY
ENGINEERING FACULTY**



Department of Computer Engineering

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MICRO-TRAINING IN FLASH FOR KAZAKH-TURKISH HIGH SCHOOLS

6M070400– «Computing systems and software» speciality

Kaskelen, 2013

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Master dissertation

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6M070400– «Computing systems and software» speciality

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Аннотация

В данной диссертационной работе рассмотрена новая концепция образования и методов обучения под названием «Микро-тренинг по Флэш программе». В Образовательной сфере нашей страны встречаются термины как «Заученное обучение» и в связи с этим были рассмотрены новые методы для устранения данного типа образования. Заученное образование это пропасть в безграмотности и лени. Начиная с детского сада наши дети должны уметь работать самостоятельно и не пользоваться заученным образованием. Мною был разработан сайт для самостоятельной работы на «AdobeFlashprogram» для учеников казахско – турецких лицеев, так как их метод обучения идеально подходит для данного метода обучения.

Annotation

In this dissertation work was considered a new conception of education methods like Micro-training in Flash for Kazakh-Turkish high schools. Educational system of our country is developing by Memorized Learning methods that are why I used to practice this method of educating. The last point of Memorized knowledge is illiteracy of our students at all. Starting up of kinder garden we must teach our kids not to use memorized learning. I created web site for teaching students to self-studying. I was using this web page in Astana Kazak-Turkish high school for gifted girls and the result was very attractive and useful. Kazak-Turkish high School educating system is very suitable for Micro-training education system.

Аннотациясы

“Micro-training in Flash” атты диссертациялық жұмыста жаңы оқыту методикасымен жаңа концепциялар көрсетілген. Біздің елімізде «Жаттанды білім» деген түсінік бар. Бала-бақшадан бастап балаларымызға жаттанды білімді беріп келеміз осыған орай Микро-трэнинг бағдарламасымен жаттанды білімді жоюға жол ашамыз. Жаттанды білім нәтижесі сауатсыз және жалқау оқушы өсіп жетіледі. Микро-трэнингпен оқыту әдісіне байланысты веб-сайт жасалды және Астана қаласының қазақ-түрік қыздар лицейінде практика ретінде сабақтар өткізілді. Лицей оқыту бағдарламасы Микро-трэнинг әдісіне өте қолайлы болып табылады.

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INTRODUCTION

- The child is in kinder garden. He does not know how to read and write all the information "explained" by tutor. Memorized education.
- The child goes to school. The preparatory group. He does not know how to read and write and all information "explained" by teacher. Memorized education.
- Beginning with the first class till the eleventh grade, even if he knows how to read and write, all knowledge "explains" the teacher. Memorized education.

Illiteracy begins with this simple "explanation." Students know how to read and write but still all the teacher reads and "explains" for him. The book is intended for the student and not the teacher. Student must himself to read and understand the text itself from the book. The teacher also provides additional information related to the subject or to give some sort of clue.

Armed with only a textbook on the subject and the teacher and student are on the path of illiteracy. Because the book is not only the formation of a thing containing partial information. It is repeated once for eleven years education. So the teacher is limited to only those that give information. Education is not a thing that can be transferred to another. The phrase - "educate" and that is not true.

All the time to explain the causes of illiteracy among children, as they stop to think. Limited to only a repetition of the teacher.

If the teacher does not explain the lesson the student will not open the book at all. Unprepared, the student motivated by the fact that the teacher was not there and he did not explain the lesson. Parents blame and complain that the teacher does not explain the lesson.

This concept is firmly lodged in the minds of our children and parents. Only 5 per cent of children say that "he has to learn." The rest sit and stare open-mouthed. The current generation does not read newspapers and magazines. A generation raised on "a learned education" that wants to come and explain everything to him. They are no feelings read newspapers or magazines.

In a class of students who had learned by heart all the text to each point we feel gifted. The remaining repeating only him gets "3" or "4". The current education we like.

In 1980, Japan has provided computers for all students wanting to pursue an intelligent generation in the future. But their efforts have ended in a big

disappointment, as young people, who grew up on the computers did not want to use their brain, and after 20 years in 2000, 90 per cent of young people have lost the ability to think. Everything was done by the computer.

Countries with which we sometimes try to emulate every year to fly down into the abyss of ignorance. 80 percent of the graduates of our schools, unfortunately, only know how to read and write and cannot think for themselves. Around the world, it is 70 percent. That's why we do not need "memorized education".

The issues of the day of introduction, development and use of innovative receptions and methods in the process of educating of students are exposed in the article. The analysis of front-rank and modern innovative tool that is used by the teachers of Institutions of higher education is conducted. Advantages of innovative approach are reasonable as compared to the traditional forms of preparation of students. 90 percentage of government schools using old, boring and missunderstandable methods of teaching computer science lessons. Mostly designing, Web-designing and animation programs needed micro-training methods of learning. The Microtraining in Adobe flash is a part of big projects which would make the teaching and understanding of topics much easier and available for everyone. Future plans to use Microtraining of Adobe Flash in Astana Kazakh – Turkish high school for gifted girls.

MICROTRAINING INTRODUCTION

The Micro training method is an approach aimed at supporting informal learning processes in organizations and companies. Learning in this sense means that an active process of knowledge creation is taking place within social interactions, but outside of formal learning environments or training facilities. This process can be facilitated by well-designed and structured systems and by supporting ways of communication and collaboration, like the Micro training method does. A Micro training arrangement comprises a time span of 15–20 minutes for each learning session, which can activate and maintain learning processes for a longer period if bundled into series as shown in Fig.1. A Micro training session can be held face-to-face, online or embedded in an e-learning scenario.

1.1 The Micro training method

Micro training sessions are structured as follows:

a. Active start (3 minutes)

Start with a mental activity e.g. thinking, reflecting, organizing and comparing.

Communicate the goal of the session.

b. Exercise / Demonstration (6 minutes)

Connect with different learning styles by using a combination of pictures, sounds and text.

Stimulate the learning process by giving concrete examples.

c. Feedback/ Discussion (4 minutes)

Ensure effective, direct and positive feedback.

Stimulate both discussion and knowledge sharing between participants.

Check if all participants really understand the content by asking questions.

d. Conclusion: What's next? How do we learn more? (2 minutes)

What are the topics we will discuss during the next meeting(s)

Discuss how to retain the knowledge.

Stimulate involvement and ensure participants leave with a clear goal.

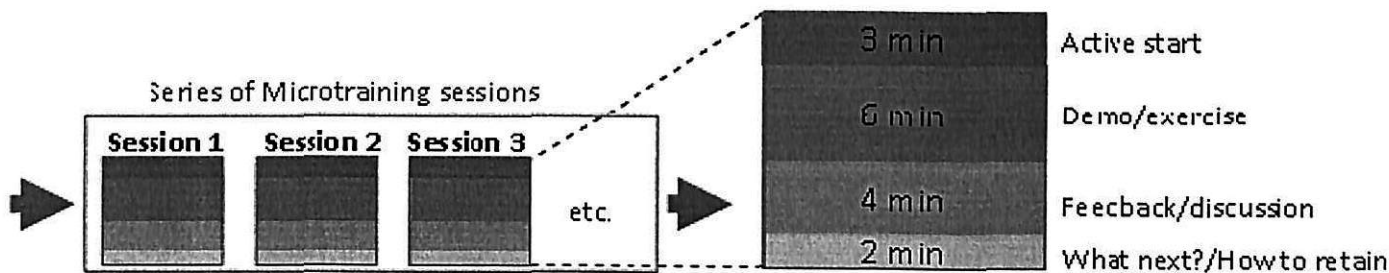


Fig.1 (The Micro training Method)

1.2 Web-based training and the shape of its implementation in the educational process

It is now possible to ascertain the active introduction of information and telecommunication technologies in various fields of industry, science and education. Recent research in the field of foreign and domestic pedagogy lies in the development of this type of technology.

This is due to the fact that only on the basis of information and telecommunication technologies are possible creation and development of the information society, the educational systems of the next generation. Thanks to these technologies, it is possible to solve many problems still not solved by traditional means: to provide a comprehensive, integrated approach to language learning, authentic (not artificial) communicative teaching materials at any stage of training, complete individual and group independent work of students operation of flexible learning models.

Application of information and communication technologies in the educational process allows for the modern concept of education that is based on student-centered and problem-based learning approach that reflects the basic ideas and principles of humanistic pedagogy.

To the greatest degree of information and telecommunication technologies realize their potential in distance learning. Following Professor ES Polat we consider e-learning as a new self-learning system with its system-components (the goals and objectives of training, content, methods, processes, tools, training and organizational forms), and not as distance learning, which uses the means of information and telecommunication technologies. We offer the following definition of distance learning:

Distance learning - a purposeful process of synchronous or asynchronous interaction between the subjects of the educational process between themselves and with the distance learning using a specialized educational environment based on the use of information and telecommunication technologies.

The basis of the educational process in the form of distance learning is purposeful, intense and controlled work student who may be engaged in a comfortable place for individual learning paths themselves with a specific set of learning tools and coherent possibility of contact with an individual distance teaching tutor (tutor, teacher contact, and facilitator).

1.3 Distance learning includes technological, organizational and substantive components.

1. Technological component is based on the material and technical base: the hardware (computers, i.e. hardware), software (software), technical support, software support, system upgrade and maintenance (upgrade and content).
2. The content component is a structured learning content, which provides invariant components of a specific type of e-learning resources: distance learning courses, online tutorials, specialist sites, portals, and methodological support.
3. The organizational component provides for the organization and conduct of the learning process using a variety of distance learning.

These components allow you to create a single information-educational environment, including the learning process, its information provision, management of the process, and the use of modern educational technology, meeting the demands of a new paradigm of education.

As experience has shown, the developers of e-learning resources are limited for the most part the implementation of technological and content sides of distance learning, not paying enough attention to the organizational component of distance learning. It is this component is responsible for the implementation of the educational

process in the developed e-learning resources, i.e., integration of e-learning resources in the learning process.

The organizational component of e-learning is implemented in different ways depending on the model of distance learning.

For the full functioning of the virtual center / university should be set up well-structured educational environment, which contains all available in this center / university distance learning courses provided by the curriculum or training program, are stored practical work of students, there is information and didactic support data rates (virtual library, a media library, electronic encyclopedias, dictionaries, electronic database of Internet resources, newsgroups, forums). In addition, information and educational environment should provide an instant opportunity to study information between all actors of the educational process.

Catching up on this model of distance learning, the student's are trained in communication, cooperation, and the teacher, combining different functions; it becomes the coordinator of the whole learning process.

In each form of the model of distance learning is an important component of an administrative unit (user registration, monitoring, and training).



Fig.2 (Structural learning process)

According to some researchers, this model of distance learning cannot replace full-time training, and be sufficient to provide a quality education.

"The integrated / combined training" is a combination of remote and internal / contact form of training, when in-person training process uses teaching materials created on the basis of the Internet - technologies and / or case - technology.

The network-training programs are used in full-time education. In the case of case - Technology training is based on already published printed or electronic textbooks / teaching aids and with additional material posted on the network. This model allows you to create e-learning information - substantive impact on various aspects of the discipline (in various areas of school education), individualized learning, enables more flexible and better use of class time, to organize new forms of individual and group work students.

Such a model, as the accumulated experience, the most common and, according to some researchers, the most promising.

"Distributed Class" (model remote audiences) is based on the organization of the educational process in real time (online) or delayed access (offline) based video conferencing, interactive television (two-way TV) or a specially created program in the forum. Mostly, this model involves the use of interactive television technology when employment is full-time with the students at the same time with the "remote" students through interactive telecommunications or video conferencing (with a special television equipment, video cameras, or web-wall audience like "apart" for due to the "remote" students with whom the teacher and full-time students can get in touch by video-conference type). But the operation of this model is available with an specially created program in the forum, which makes this model available for the majority of Russian and foreign universities, as it does not require the use of expensive equipment.

Each model has its own organization and for specific ways of interaction between the participants of the learning process between themselves and with the training.

1.4 Form A "Self individual work without tutor"

In the variety of network learning models learner interacts only with the means of learning. Shareware - an interactive computer environment of the course allows the user to organize training activities, without the help of a teacher e-learning: monitoring and evaluation of the correctness of the tasks carried out by means of an automated system context help and guidance virtual teacher, built-in software course.

Training Mode simulates the process of training under the guidance of a teacher. Software sets the course tough sequence of stages / steps of passing the lesson and provide the optimal form validation. In the free mode, the user controls the learning process, depending on the professional and communicative needs. He can choose a convenient sequence of stages / steps of passing the lesson or to focus on relevant tasks for themselves, and choose a convenient form of verification of the fulfillment of tasks ("instant" or "after the entire job"), to decide whether to show the correct and leave a response indicator is correct answers.

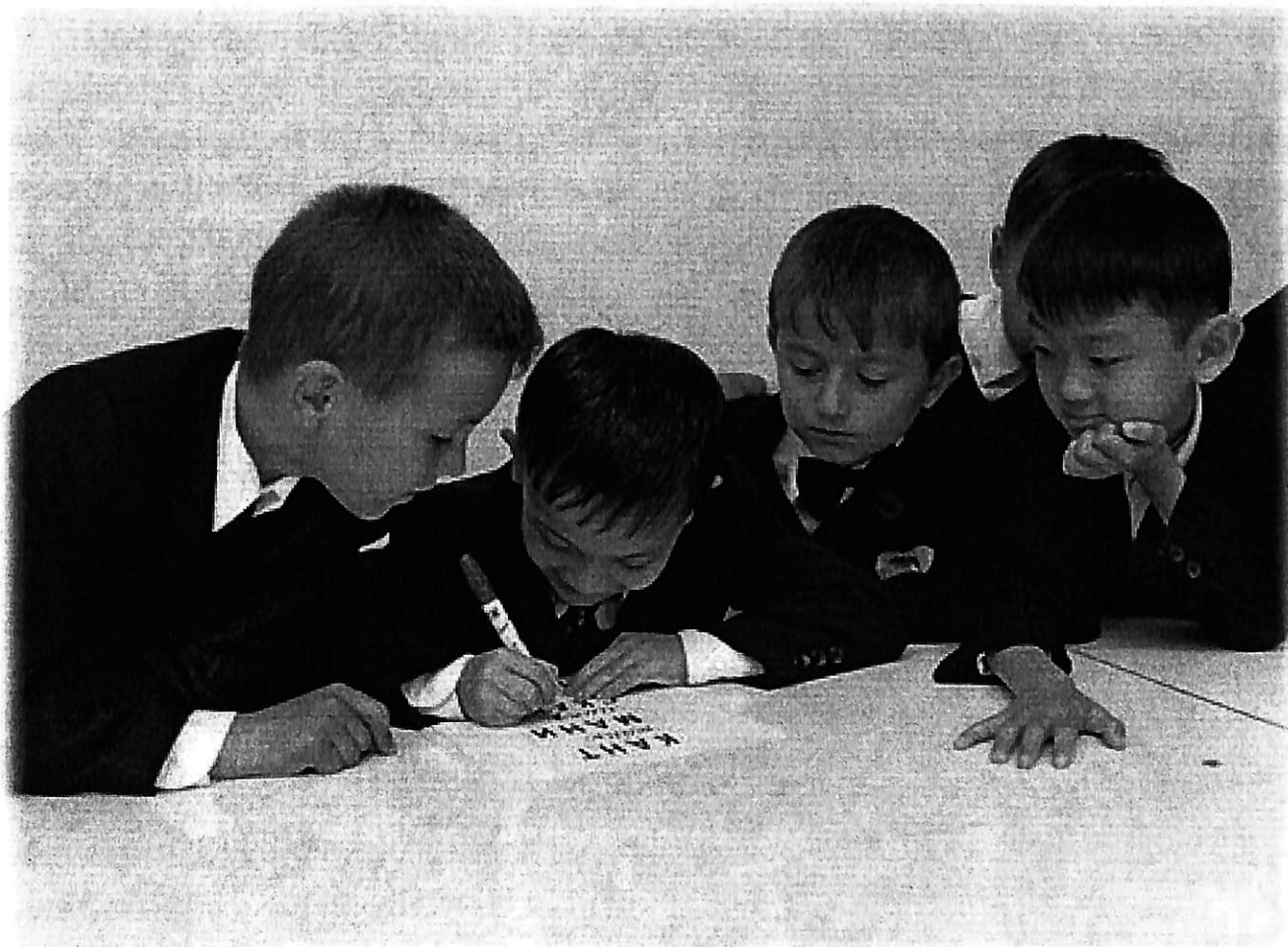


Fig.3 (Self individual work)

1.5 Form B"Self individual work with a tutor"

In this form the model of online learning student interacts with a means of learning and distance learning with a teacher. Due to the fact that the software of the course includes a conditional-interactive types of tasks and built-in feedback loops between learners and a center of learning, the learning process can be organized not only in the form of independent work of students, but also in the form of a dialog information exchange with the teacher distance learning that by combining different

functions, it becomes a consultant, partner, coordinator of virtual learning activities of students.

Student interaction with the learning tool is the same as in the form of "Grid individual work without tutor", but only on the strict condition that the student performs all the tasks in "learning mode". Only in this mode, all the monitoring of pre-and post-look-look-lesson exercises, including online job "Writing articulation of the core content of the scanned TV story" comes in "student portfolio" on page tutor for further correction and comment.

Student interaction with the teacher distance learning. The possibility of organizing such an interaction of subjects of the educational process seems to us the main advantage of using information and communication technologies in distance learning as it allows to fully realizing the main principle of distance learning and one of the central concepts of the educational process - interactivity. Thanks to the available software shells administrator and teacher can be implemented remote system management process, in particular, the training activities of each student and students in a group, and remote administration of the educational process.

Consider ways to interact with the student's teacher of distance learning.

1. The student performs all the tasks in "learning mode" and sends them to your personal tutor for review. Teacher distance learning, getting the job and statistics assignments, corrects and comments admitted lexical, grammatical errors and a stylistic error, send your comments to the recommendations of the learner, and reserves the necessary entries in his journal performance.



Fig.4 (Distance lerning process)

The student, in turn, gets checked and corrected the work and has the ability to perform work on the bugs and re-direct it checked by your personal tutor. Thus, thanks to built-in software course feedback channels implemented distance learning basic principle - the principle of interactivity.

2. Teacher distance learning, combining the functions of a personal tutor, partner and coordinator of student learning activities should not only examine and comment on the written work, but also by evaluating the psychological climate, stimulate its training activities, using new teaching technologies that reflect the basic principles of student-centered approach.

This format may be used in the educational process at the rate in the same way as a form of "Self individual work without a tutor," but, in addition, it allows the student to provide feedback to constantly communicate with your personal tutor of distance learning, to receive advice and recommendations.

1.6 Form C "Independent work in a mini-group with the tutor"

In this form the model of online learning student interacts with the medium of instruction, distance learning with the teacher and other students in this course. The educational process takes place in a virtual classroom or auditorium ("virtual community"), where student's are trained in communication, cooperation, and the teacher organizing the learning process becomes a focal point of the entire virtual learning community. To provide training in this form of distance learning teacher should select appropriate methods, educational technology training in small groups at different stages of the cooperation of cognitive activity, stimulating discussions, individual, group and pair the project activities, including foreign students from other regions and other countries, role-playing, business games focus problem by implementing educational technology "cooperative learning," and heuristic methods of teaching.

The organization of such full cooperation of all participants in the educational process is potentially possible based on the software of the course, and the author of the e-learning resource already has some experience in its implementation.

As in the above model of network forms of training, trainees were all by yourself first lesson in "learning mode", working at a convenient time, in a convenient location and comfortable setting speed assignments. Next, each student directed his work to your tutor of distance learning for verification and subsequent comments. Unlike other forms of this model of teach distance education teachers to create a virtual mini-groups of 2-3 people, depending on occupational interests, giving them additional jobs and stimulating forum for communication within the specific sub-category, and the entire category. All forms of written communication were in Russian and had to develop writing skills. Each teacher regularly perusing the written utterance of their virtual students could annotate and send them to your web-page in the "student's portfolio."



Fig.5 (Study with tutor)

In summary, we can say that online learning as one of the models of distance learning to the greatest extent with the basic requirements of distance learning as a self-learning system, allowing you to fully realize the basic principles of the modern concept of learning based on student-centered approach and problem-based learning through the use of specific means of Internet technology.

1.7 Microtraining in Education

Education is a strategic foundation of the individual, society, nation, state and the key to a successful future. The transformation of post-industrial society in the global information based not only on knowledge but also on the expertise of specialists, the problem is



Fig.6 (Micro-training process)

much actualized innovative approaches to educational processes. As

a result, the system of education in today's conditions, he is very demanding: it must prepare professionals to live and work in a wide, dynamic, rapidly changing world, where the person is constantly facing unusual problems whose solution requires the skills to build and analyze their own action. To achieve this goal in the federal target program of education development for 2011-2015, particular emphasis was placed on providing innovative nature of the education system in accordance with the socio-economic challenges and the innovative nature of the economy. The leading role in such a system with innovative methods of training of students in higher education, which in the future will be directly involved in the creation and enforcement of investment and innovation policy.

In the current scientific literature on the problems of management of innovation processes in the field of educational activities, there is the complexity and diversity of the process. Particular attention is focused on the fact that an innovative approach to teaching students should be systematic and should cover all aspects of teaching and education in preparing future professionals, and there should be a revision of theoretical and practical approaches to the content of education, vocational and educational training of teachers, development of new technologies and teaching methods. However, most studies have focused on secondary schools, and high school is unjustly overlooked domestic scientists. And the works that focus

features and attributes of innovative methods of student learning, and to identify the advantages and prospects of various innovative forms of learning, not so much.

As you know, the basis of innovative educational technologies used in the learning process, should be a social order, the professional interests of the future experts, taking into account individual, and personal characteristics of students. Therefore, for training in high school use of innovative forms and methods must be organically combined with a pragmatic understanding of the goals and objectives of education and training.

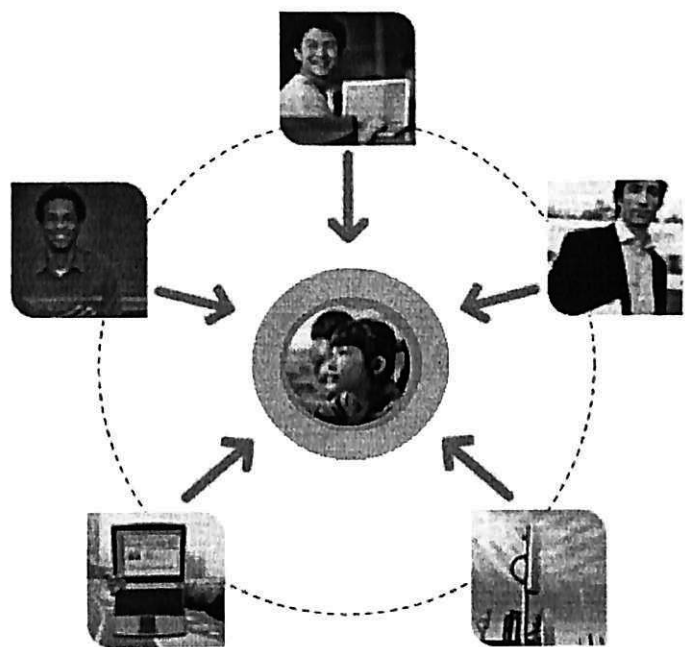


Fig.7 (Micro Training bases)

In modern psychological and educational literature notes that innovative methods are reflected in many learning technology aimed at the development and improvement of the educational process and training for professional careers in various areas of modern life as in Fig.20. They create the conditions for the formation and consolidation of professional knowledge and skills of the students, promote the development of professional skills of the future specialist. The use of innovative teachers in the learning process helps to overcome stereotypes in teaching different subjects, developing new approaches to professional situations, the development of creative, creativeabilities of students.

Effective forms of educational work to introduce the learning process of innovation processes and the formation of key professional skills of future professionals is the use of different active forms and methods: creating projects, preparation of public speeches, panel discussion of important professional issues, cooperative learning, the creation of problem situations, vocational training directed videos and presentations, etc. The transition from information-explanatory training to innovation related to effective use in the learning process of new computer and

various information technologies, e-books, videos, provide a free search activity, and involves the development of personality and orientation. Based on this, today it may be noted various innovative methods of student learning, in particular, is problematic and game technologies, technologies for collective and group activities, simulation methods of active learning, the case method, the method of projects, cooperative learning, creative learning, innovation educational project activities, lecture-press-conference, lecture-discussions, lectures, visualization, lecture, debate, etc.

1.8 Educational Innovation

Innovative educational project activity is an effective form of educational process aimed at personal development of cognitive interests and creativity of students. This method involves the mastery of technology presentation of various creative works (reports, reviews, abstracts, and reports on professionally oriented themes). The meaning and purpose of pedagogical innovation is the implementation of a new vision of teaching methodology, bringing new techniques, technologies, multimedia training tools for the development of a future professional.

1.9 Creative teaching

Creative teaching on the free access of each student to Internet resources and is based on the following principles:

- *The basis of creative learning is supposed educational product that will be created by students;*
- *The appropriate external educational product of its internal needs of the student;*
- *Individual student's educational trajectory in the educational space;*
- *Interactive sessions conducted by means of telecommunications;*
- *Open communication to the student created educational products.*

Thus, summing up, it may be noted that the basis for innovative methods of teaching students are active methods, which help to form a creative and innovative approach to understanding the profession, to develop independent thinking, the ability to make the best in a given situation solutions. Practice shows that the use of innovative methods in vocational oriented training is a prerequisite for the preparation of highly qualified professionals. Using a variety of methods and techniques of active learning arouses students' interest in the most educational and cognitive activity that creates an atmosphere of motivated, creative learning and simultaneously solve a range of training, educational, developmental problems.

1.10 Art of asking questions mini-training thinking

Art of asking questions - one of the basic skills for learning and for professional work. Progress in the development of the material can be assessed from the point of view of what questions to ask people. Many professions are built on the ability to ask the right questions, questions for effective information gathering. Doctors, managers, teachers, lawyers, psychologists specially taught to ask questions. The questions that man asks when he did not have enough information, show the level of understanding and ability to master speculate. Asking questions helps to solve intellectual problems, contributes to a better understanding between people.

Modern man is asking questions not just another person, but also the search engines on the Internet. Ability to identify key words that "search engine" will give meaningful links based on the same art of asking questions - rather than just the question you are asking keywords from the proposed answer.

Try the following tasks (you can choose one of three options, but it is better to perform all).

Task 1. Imagine that you are teaching foreign literature and want to find out how your students have mastered the tragedy of William Shakespeare's "Hamlet." What are 10 questions you would ask to find out the depth of knowledge of your students? Record your questions.

Task 2. Imagine that you are a leader, and one of your employees was late with the terms of the important tasks. Come up with 5-6 questions that you would ask to understand why it happened and determine a fair measure of punishment. Think about whom you could ask them.

Task 3. Imagine you are an art critic. Do you choose films for the festival. Your task to select 3 of the 5 films submitted for the competition. Come up with 3-4 questions to those who have seen these films that would make you the choice to view it.

What questions you are "used" - open, requiring a detailed answer ("When did you use this thing for the last time?") or closed, which can be answered "yes" or "no" ("Have you been looking for that thing?"). Note that the open-ended question gives the other party a better chance to speak, and you - to get more information. Another problem of closed questions - an idea to ask questions about what a long time ago, far, well, to be materially different from those of charge (so born misunderstanding).

For you, a "long" - a week ago, and for another - yesterday. Try to reformulate the questions that were on your list closed so that they become open.

EDUCATION

2.1 Education in Kazakhstan

The state policy of Kazakhstan in the field of education since 1991 was carried out in the direction of the reform of the legislative framework, the management and financing of education in the context of the problem of qualitative transformation of the education system. The reform of higher education in the country has become the most intensively carried out since 1995.

During the years of independence Kazakhstan stages of the reform of higher education can be divided into the following.

The first phase (1991 to 1994). The formation of the legislative and regulatory framework of higher education.

The state policy of Kazakhstan in the field of education since 1991 was carried out in the direction of the reform of the legislative framework, the management and financing of education in the context of the problem of qualitative transformation of the education system. The reform of higher education in the country has become the most intensively carried out since 1995.

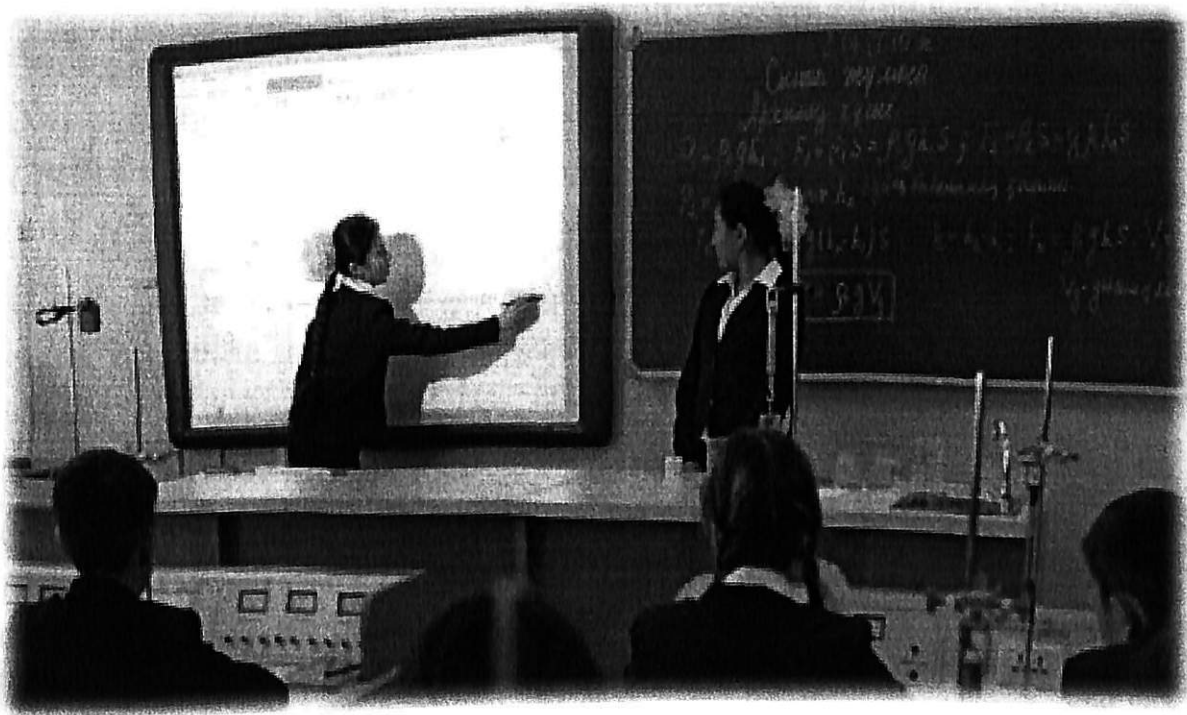


Fig.8 (Standart methods of Education)

2.2 Education Reform

During the years of independence Kazakhstan stages of the reform of higher education can be divided into the following.

The first phase (1991 to 1994).

The second phase (1995 to 1998).

The modernization of higher education, updating its content.

The third phase (1999 to 2000).

Decentralization of management and financing of education, the expansion of academic freedom of educational organizations.

The fourth stage (beginning of 2001 to 2007.)

The strategic development of higher and secondary education.

According to the reforms in the education sector in the 90 years have seen the democratic nature of management education; expanded the authority of educational institutions, state-guaranteed free secondary and primary professional education in public schools, introduced the principle of triyazychiya; legalized non-state sector of education and the right to an education RK as citizens of the Republic of Kazakhstan for the Kazakhs, who are citizens of other countries, to create a legislative framework for the introduction of the credit system in the form of educational grants or loans, restructured network of universities and research institutes to enhance maneuverability and mobility, autonomy of higher education institutions recognized as one of the basic conditions of social efficiency of higher education.

A new stage of development of Kazakhstan is focused on the rapid progress of the state to the community's 50 most competitive countries of the world. In this regard, education policy aimed at creating a national model of education, integrated into the world educational space and providing training, competitive in the global labor market.

The document defining the long-term priorities in the field of education is the "Strategic Development Plan of the Republic of Kazakhstan till 2010", developed in order to realize the long-term strategy "Kazakhstan-2030". On the basis of this document were drawn up two state medium-term program for the development of education, the first of which was approved in 2000 (for the period 2000-2005.), The second - in 2004 (for the period 2005-2010.). The State Program of Education Development in the Republic of Kazakhstan until 2010 was designed based on the

Concept of development of the education system of Kazakhstan till 2015, approved by the Government in February 2004.

The State Program on the Development of Education in the Republic of Kazakhstan for 2005-2010 priorities of education policy aimed at finding the best ways to adapt the system of higher education to the market economy. The program will be implemented in two stages: the first stage - the years 2005-2007, the second stage - 2008-2010. The expenditure of the state budget required to implement the program amounted to 330 812.0 mln, including from the national budget 175,769.8 million tenge from the local budget 155 042.2 mln.

The program provides the following main areas of development: the transition to 12-year secondary education, the creation of a system of technical and vocational education, provision of a three-tier system of professional training - bachelor-master-doctorate (Ph.D), based on a system of academic credits, consistent with the provisions of the Bologna Declaration and international standards, the creation of a national system of quality education.

The main directions of the program legislated in the new Law of RK "On Education", approved July 27, 2007. That meets the needs of economic and social modernization, and takes into account international requirements for new educational systems. The structure of the Kazakhstan system aligned with the criteria for the classification of educational programs of the International Standard Classification of Education ISCED-1997 recommended by UNESCO. According to Article 8 of the new law, the education system has seven levels. The first of them - pre-school education and training. Followed by primary, basic secondary, secondary, post-secondary, college and, finally, post-graduate education.

The internationalization of higher education is an important aspect to achieve the intent of Kazakhstan to become more competitive country, which is to introduce the international dimension into all areas of education and research, both at the national policy level and at the school level. Some measures have already been taken, commendable, including the creation of "Bolashak" program, the adoption of the Bologna process and the preparation for the adoption of the Lisbon Convention on the mutual recognition of diplomas and qualifications in higher education.

Financing of education in comparison to last year increased by 40%, from 2005. - Twice. In 2007, the state budget expenditures on education amounted to 1.1% of gross domestic product. The budget of the Ministry of Education and Science in 2004 amounted to 31 billion, in 2007 - 131.5 billion tenge. Share of GDP, 3.5 percent. This corresponds to the level of countries such as Germany, Finland,

Slovakia, Spain, and in the coming years we will reach the average level of education funding. On social programs for students and college students from the state budget to be allocated about 974 million tenge

Systematic measures are taken to improve the quality of secondary education and schools. Carried out to strengthen the material and technical base of schools. To supply equipment for physics, chemistry and modern computer technology. The ratio of provision of computers to students in 2008 will amount to not less than 1 in 20 (now 1:26). On behalf of the President of the country to eliminate the 3-hsmennogo training and replacement of damaged buildings in the school for three years in the regions of Kazakhstan will build 100 new schools. Considering the issue of the construction of private schools with study subjects in three languages.

Carried out preparatory work for the introduction into the learning process of educational organizations multiservice information and educational system. The project will provide broadband access to schools is not limited to the Internet via KazSatNet. This, in turn, will lead to the development of independent work of pupils, teachers and unloading, as a whole, to improve the quality of education.

Develop a state program of development of technical and vocational education in the years 2008 - 2010. The adoption of the state program will provide training in accordance with the needs of the labor market. Will be increased by government order, the network expanded vocational schools, reinforced material resources with business funds, expanded social partnership. The list of breakthrough projects to be implemented with the participation of investors, it is proposed to include the construction of 15 vocational schools for oil and gas, machine building, metallurgy, metal processing industry, construction and transport.

In accordance with the Bologna Process Kazakhstan moved to a three-tier model of training: Bachelor - Master - Doctorate Ph.D. 42 high school passed the certification audit of quality management systems in European agencies. The list of priority occupations for training for doctoral and master's programs with a view of cluster initiatives.

2.3 Science.

Integration processes in the national and global economy, lead to the dominant role of education in ensuring the competitiveness of universities. Therefore, Kazakhstan requires not only highly skilled, but also elite universities, which are powerful research, educational, and scientific and industrial complexes. This year, the Ministry has developed a new model of management science, aimed at providing

a breakthrough to the forefront in the world. An important event for the development of the scientific sphere is the adoption in 2001 of the Law of the Republic of Kazakhstan "On Science," which defined the basic objectives and principles of the national science and technology policy. Conducted by the Ministry of the specific implementation of phased integration of scientific and higher education institutions. Decree of the Government of the Republic of Kazakhstan from 14.02.2000, № 236 "On some measures for the integration of education and science of the Republic of Kazakhstan." A reorganization of a number of scientific and educational organizations through their affiliation, established 30 research institutes and research centers in the 11 higher education institutions. Organized by the Higher Technical Committee. Government of the Republic of Kazakhstan approved six priority research areas: Nanotechnology and New Materials, Biotechnology, Technology for hydrocarbon and mining-metallurgical sector and related service industries, nuclear technology and renewable energy technologies, Information and Space Technology. Will combine research in the social sciences and humanities in the context of "national idea as a basis for sustainable development of Kazakhstan." We plan to create five national laboratories open. Access to open labs will have all the scientists and research teams not only in Kazakhstan but also in other countries.

The basic directions of development of science in Kazakhstan. This support for investments aimed at developing technologies, encouraging the private sector to support science, scientific support needed for service, support of science and technology in education, improve the quality of basic research.

It should be noted that Kazakhstan has significant scientific and technical potential shown by scientific organizations of various forms of ownership and departmental prindlezhnosti. V part of the structural reform of science is planned to combine a number of academic research institutions with leading universities. The President instructed to provide direct support for the creation of innovative educational consortia. At leading universities will be concentrated high technology for scientific and applied research. According to the University will be given the status of Innovative Universities.

A draft of the State program of development of science in the Republic of Kazakhstan for 2007-2012.

Carried out by the Ministry of Scientific and Technical Expertise of the national scientific potential and priority directions of science. As the audit of science, physics, applied physics and mathematics, organic chemistry, earth science, physical chemistry are characterized by a high publication activity and high levels of quoting.

High-quality research papers differ plant science, space science, molecular biology and genetics.

ADOBE FLASH

3.1 What is flash?

Adobe Flash is a multimedia and software platform used for authoring of vector graphics, animation, games which can be viewed, played and executed in Adobe Flash Player. Flash is frequently used to add streamed video or audio players, advertisement and interactive multimedia content to web pages, although usage of Flash on websites is declining.



Fig.9 (Adobe Flash logo)

The Adobe Flash Enabled logo represents Adobe's Flash Player technology on the Web, in products, and in devices licensing this technology as show. Licensee's and Web sites utilizing the Flash Enabled logo are required to follow these usage guidelines.

The Adobe Flash Enabled logo is used to identify and promote Adobe's Flash Player technology. Use of the logo is limited to parties under license from Adobe System's, Inc. as outlined in the permissions section below.

3.2 Adobe Flash Development

Development of Flash program started 10 years ago by Macromedia Company. Later Adobe bought Flash software and generates it as shown in Fig.3. Flash manipulates vector and raster graphics to provide animation of text, drawings, and still images. It allows bidirectional streaming of audio and video, and it can capture user input via mouse, keyboard, microphone and camera. Flash applications and animations can be programmed using the object-

▪ Developed 10 yrs ago by Macromedia


Flash 1-5


Flash MX & MX 2004


Flash 8


Flash CS3

▪ Adobe bought Macromedia!

Fig. 10 (Adobe Flash Development)

oriented language called Action Script. Adobe Flash Professional is the most popular and user-friendly authoring tool for creating the Flash content, which also allows automation via the JavaScript Flash language.

Adobe Flash Player makes the Flash content accessible on various computer systems and devices and is available free of charge for common web browsers, some smart phonesand tablets, and a few other electronic devices using Flash Lite.

Over the releases of new versions of Flash, Macromedia has made Flash more and more controllable via programming, where they have it positioned as a competitor to HTML to build interactive web sites and applications such as an e-commerce store.

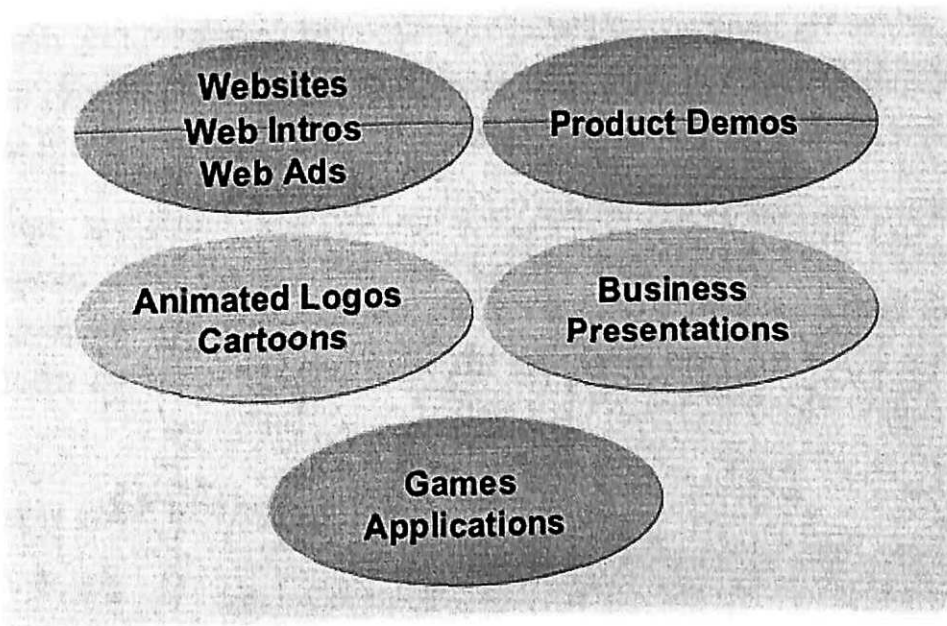


Fig. 11(Usage of Flash)

Macromedia argues that Flash is the way to go instead of HTML because of the following reasons:

Flash movies load faster and save on download time because Flash is vector based whereas HTML is not.

Flash intelligently ‘caches’ it’s movies so they don’t have to be reloaded.

Flash gives the user (the person viewing/using the Flash movie) a more responsive ‘rich-client’ like experience.

All of these points are true, but they can be true for HTML pages as well (except for the vectors). I will address these points now:

Flash pages can be made to load faster, but most of the time, the way they are designed in the real world, they do not. That is not a Flash problem; it is more an issue of the Flash developers going nuts with fancy and heavy Flash movies.

HTML caches pages as well; once images are downloaded they are held in your browser's cache. The cached images are then used instead of downloading them from the server again.

3.2 Flash in the Past

Flash handles text very poorly. The web for the most part is about text, we go to the web to read about things, whether it be articles like this one, or what is in your shopping cart, or the latest baseball stats, it is all text.

Flash text rendering/displaying is much slower than HTML and noticeably less clear. Macromedia knows this and that's why they include the ability to display basic HTML in Flash and that's why on their own site, they make heavy use of HTML.

There are some disadvantages of Adobe Flash software. Flash development usually takes much longer than the HTML equivalent. This has been helped to a great degree starting with the release of FLASH MX where they essentially provided HTML form components, but it is still slower to create a Flash site than an HTML site.

3.3 What is good in Flash development?

1. It is possible to create some really nice work in Flash that would be difficult and sometimes impossible in HTML alone. Things like complex animations and playing video spring to mind.

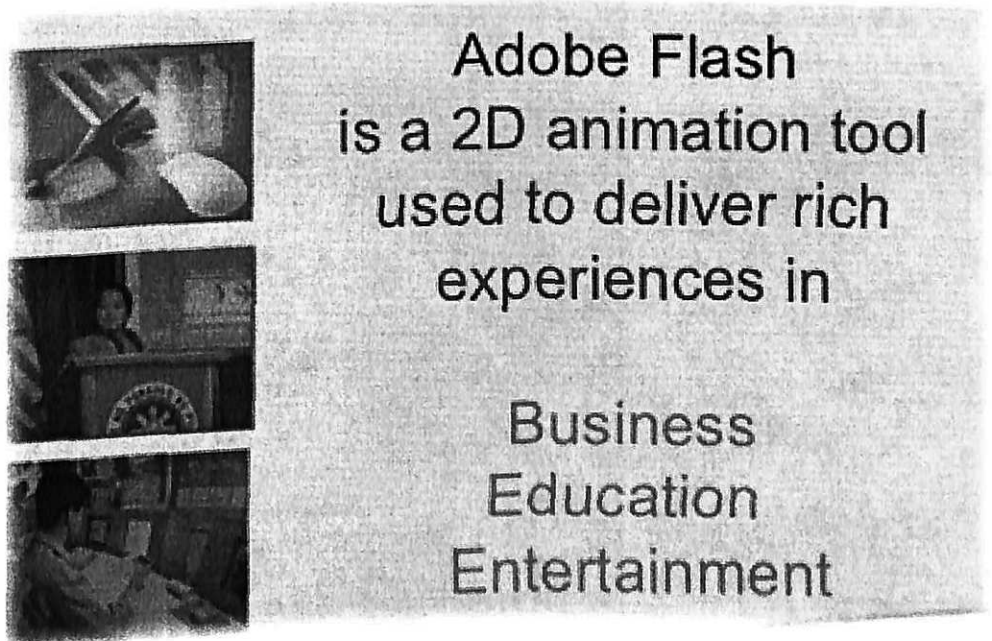


Fig. 12 (Adobe Flash is everywhere)

2. In practice no browser issues: For the most part, Flash movies will work the same if the user is on Netscape or IE, on Mac or PC. The browser issues (where people coming to your site have different browsers that can ‘break’ your pages) are quickly becoming a thing of the past since most people (thank the web gods) are using IE. But even today, we still have to deal with people who may be using some old browser that can break all but the simplest of HTML code.

3.4 So when does Flash useful?

Creating Flash presentation that is similar to a television commercial. This type of presentation is something where the user sits back and enjoys the show as the Flash movie delivers the message to the client with animation, sound, and possibly video. Please do not get this confused with those ubiquitous ‘intro’ animations that still plague many Flash sites.

CHAPTER4:FLASH BASICS

4.1 Understanding the Flash workspace

Learn how to identify the elements of the Flash workspace so you'll have a better understanding of the Flash authoring environment. Become more familiar with the interface and how it works by watching this beginner tutorial.

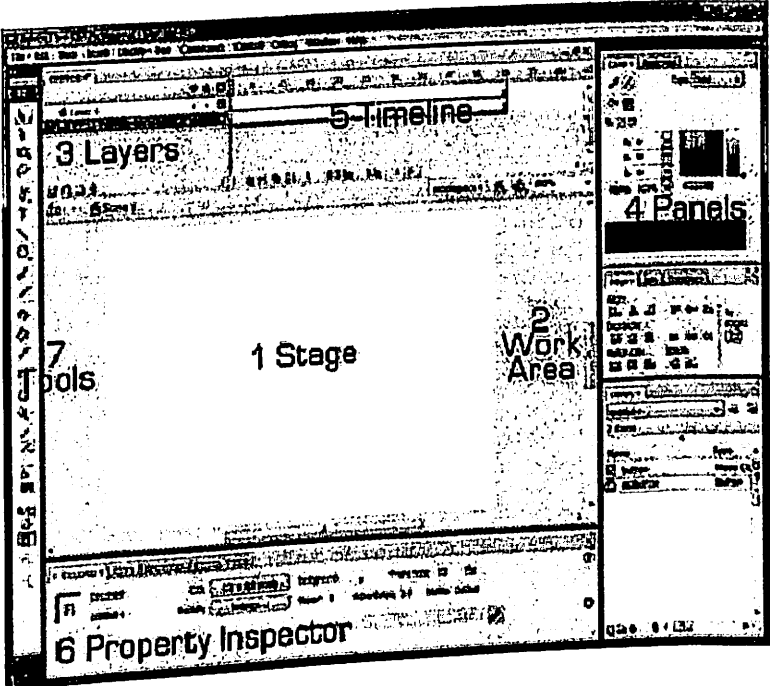


Fig. 13 (Adobe Flash Interface)

Flash interface consist of: 1-Stage, 2-Working Area, 3-Layers, 4-Panels, 5-Timeline Control, 6- Properties, 7-Tools or Instruments.

4.2 Creating and saving files

Begin by creating your first Flash document and then move on to creating an animated banner add. Find answers to your questions if you get stuck as you follow along with the step-by-step instructions.

4.3 Organizing assets with the Library

Bring images into Flash and begin working with the Library panel. You can use the Library to manage, organize, and preview the reusable assets in your file. Learn how to switch between the libraries of open files to swap library items between multiple projects.

4.4 Testing the movie to preview a sequence

By adding graphic content to the Stage, you can preview the sequence in the workspace to see how the final presentation will be displayed in Adobe Flash Player, choose Control > Test Movie. Once you're familiar with the basics, learn alternate ways to test a project and best practices for debugging issues. Hyper Text Markup Language has some functions for putting in ready Action Script (*.swf) to the Web.



Embedding Flash into HTML:

```
<html>
  <object width="400" height="300" id="movie">
    <param name="movie" value="movie.swf">
    <embed src="movie.swf" quality="high" width="400" height="300"
      name="movie" align="" type="application/x-shockwave-flash">
    </object>
  </html>
```

Fig. 14 (Flash Script on HTML)

4.5Publishing files

When you're ready to deploy the Flash project to the web, choose the Publish Settings to create the HTML page with the embedded SWF file. Experiment with exporting alternate file formats and adding Flash Player detection.Adobe Flash Penetration.



Flash Player Penetration:

Flash as a format has become the dominant desktop video player and become the player of choice, because of its streaming ability. Adobe has over a 98 percent market penetration for desktop users. Here is a chart from the Adobe website, comparing it to other popular video streaming players.

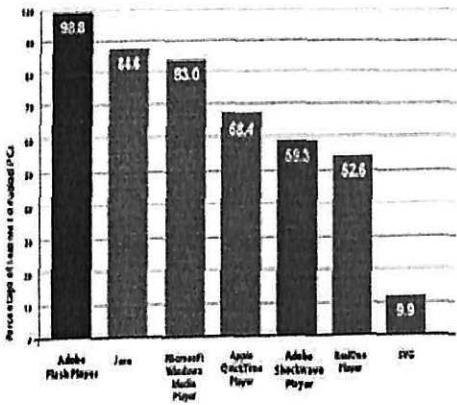


Fig. 15 (Adobe Flash Penetration)



Version Penetration:

“Adobe's Flash player has done more to enable the current growth of interactive marketing and advances in design/interaction than any other plug-in in history. Penetration numbers have bounded to close to 100% for past versions of the player.”

Worldwide Ubiquity of Adobe Flash Player by Version — December 2007 ¹				
	Flash Player 6	Flash Player 7	Flash Player 8	Flash Player 9
Mature Markets ¹	98.8%	98.8%	98.3%	95.7%
US/Canada	98.0%	98.0%	98.5%	96.6%
Europe ²	98.1%	98.1%	97.6%	94.3%
Japan	98.5%	98.5%	98.3%	95.5%
Emerging Markets ³	97.4%	97.2%	95.6%	83.2%

Worldwide Ubiquity of Adobe Flash Player by Version — September 2007 ⁴				
	Flash Player 6	Flash Player 7	Flash Player 8	Flash Player 9
Mature Markets ¹	98.1%	98.1%	98.4%	93.3%
US/Canada	98.0%	98.0%	98.5%	94.1%
Europe ²	98.2%	98.2%	98.2%	93.7%
Japan	98.5%	98.5%	98.6%	91.3%
Emerging Markets ³	Not surveyed in this wave			

Fig. 16 (Version Penetration)

GRAPHICS AND SYMBOLS

5.1 Drawing and editing vector shapes

Adobe Flash can manipulate vector and raster graphics as shown in. Use the drawing tools, such as the Oval tool, to draw vector shapes on the Stage. After selecting a tool and setting the fill and stroke colors, choose between object and merge drawing modes. By creating overlapping shapes, you can edit and cut paths. Then adjust the stroke and fill colors to finalize the drawings. Vector artwork created in Flash Professional CS5.5 can be converted into a bitmap file and then edited in Adobe Photoshop.

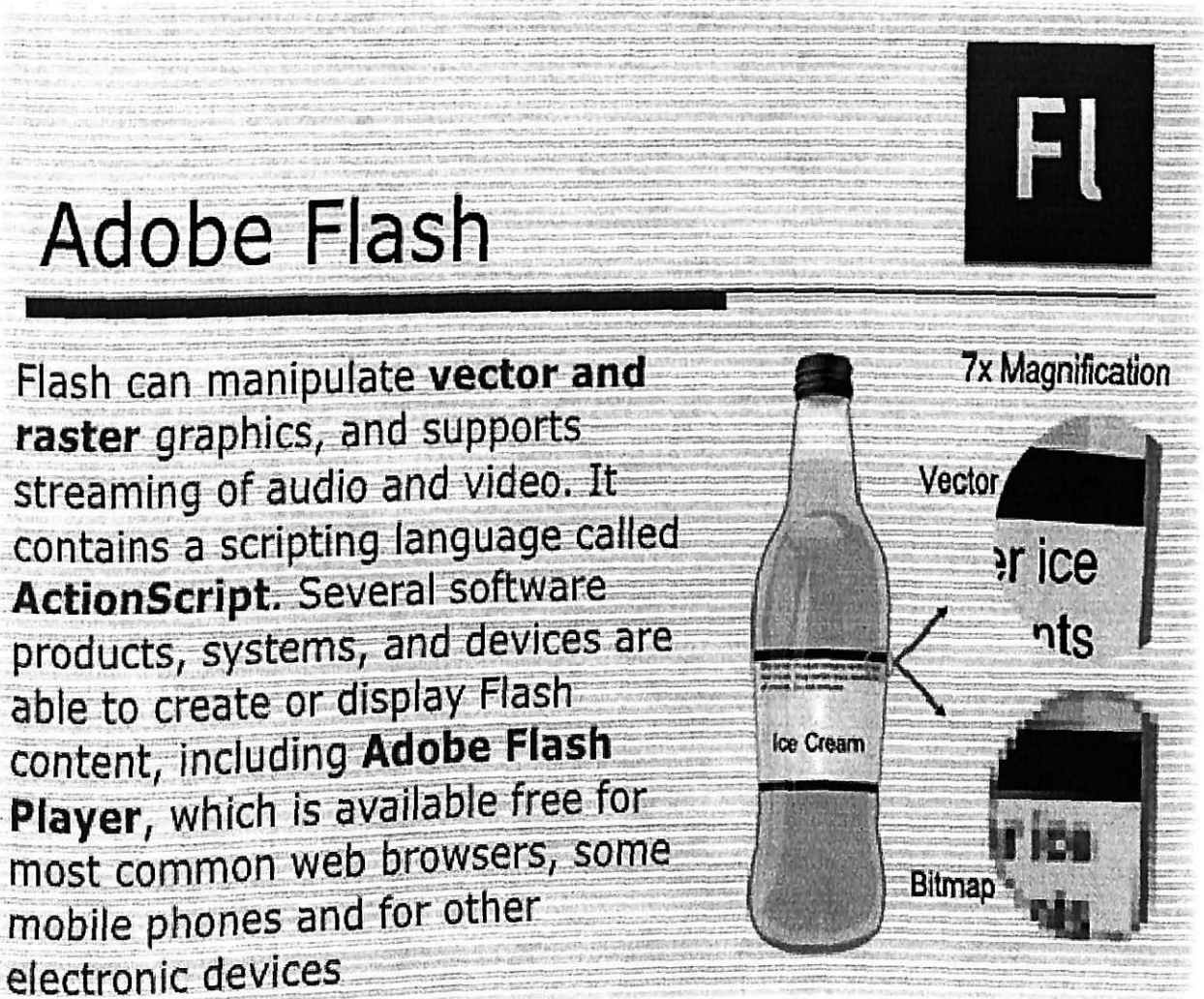


Fig. 17 (Vector and Raster graphic in Flash)

5.2Selecting, manipulating, arranging, and grouping vector objects

By editing and manipulating vector shapes, you can create complex patterns and designs. Change the stacking order by arranging objects to appear in front or behind other objects. Group objects to keep sets of vector shapes together.

5.3 Scaling, rotating, and skewing objects

Enhancement Example of two Web page good looking results.Use the Free Transform tool to refine vector shapes further. Resize selected vector shapes by dragging the control handles or entering numeric values in the Property inspector. Reposition a vector's transformation point to specify the axis an object turns around before rotating, skewing, and flipping vector shapes.



Progressive Enhancement Example:

Using web technologies in a layered fashion that allows everyone to access the basic content and functionality of a web page, while also providing those with better bandwidth or more advanced browser software an enhanced version of the page.

With JavaScript On

With JavaScript Off



Fig.18 (Adobe Flash Examples)

5.4 Importing image files

Add graphics to the project by importing and editing bitmap images. You can import a wide variety of file formats to bring in artwork created in other applications, including Adobe Fireworks, Adobe Illustrator, and Adobe Photoshop.

5.5 Creating symbols

Convert graphics into symbols to optimize projects when reusing common assets. Create movie clip symbols to encapsulate animations in their own timeline and reference them with Action Script code. You can nest symbols inside other symbols to organize them and make them easier to update. As new bitmap image files are imported, you can automatically convert them to symbols. Streamline production by duplicating existing symbols and editing them, rather than recreating each similar symbol from scratch. There are some Flash symbol properties in Fig.14.

Flash Symbols:



Graphic symbols are reusable static images that are used mainly to create animations - Any drawn vector/plain text/imported bitmap (photo), or combinations of these, can be converted into a single controllable object: as a graphic symbol. They have only one frame in their timeline.

Button symbols are used for timeline navigation - They add interactivity to the movie and respond to mouse clicks, key press or rollovers/rollout, and other actions. You define the graphics associated with various button states (Up/Over/Down/Hit), and then assign actions to the instance of a button. They have 4 frames in their timeline - one each for the up, over and down states, and one to define the hit area of the button.

Movieclip symbols are reusable pieces of flash animation - Consisting of one or more graphic/button symbols - thus they are flash movies within your flash movie. They have their own non-restricted Timeline (any number of layers and frames - just like the main timeline) that plays independent of the main movie's Timeline. The best thing about using movieclips is that you can control them from actionscript.

Fig.19 (Adobe Flash Symbol types)

5.6 Applying filters and effects

Create interesting visual effects by applying filters to text, buttons, and movie clips. Experiment with animating the filters you apply using motion tweens.

TIMELINE ANIMATION

6.1 Working with the Timeline

Fig.15. shows us Timeline Control brief explanation. Begin by learning how the Timeline works to get a better understanding of frames and keyframes. Add frame labels to refer to each frame by name instead of by frame number. You may find it convenient to change the appearance of the Timeline as you start animating objects on the Stage.

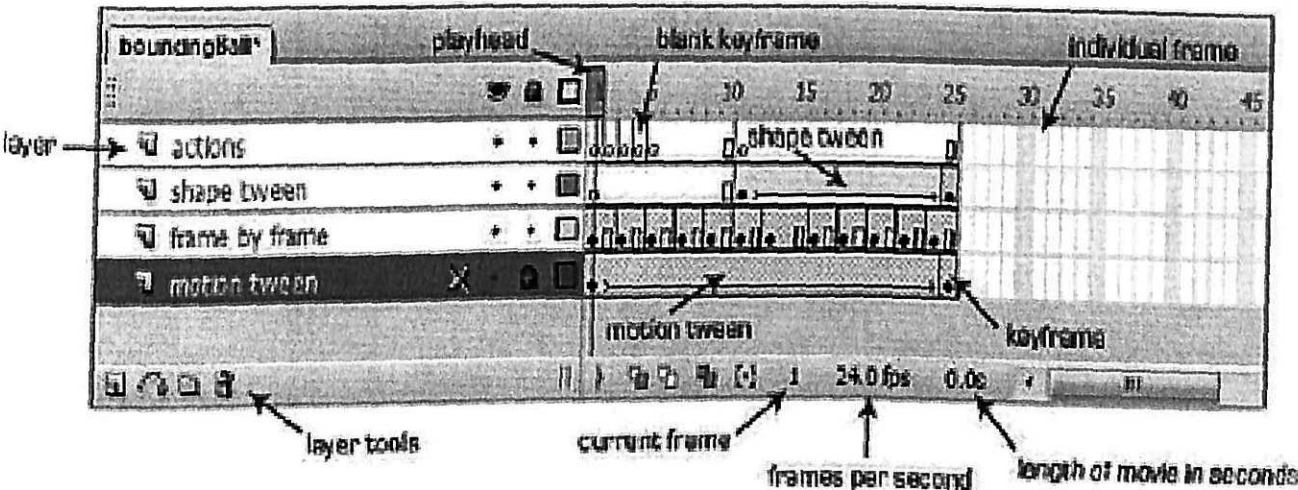


Fig.20 (Adobe Flash Timeline Control)

6.2 Manipulating keyframes in the Timeline

To control animations, you'll insert, move, and delete frames and keyframes. As you work, you can edit frames in the Timeline. Become familiar with the visual cues that represent frames and keyframes to understand how the Timeline dictates when objects will appear and disappear.

6.3 Creating animation with motion tweens

Animations created with motion tweens display a motion path that indicates the location of the tweened object on each frame. Using movie clips, you can create a motion tween with an animated symbol. When creating more complex animations, such as movie navigation, be sure to name layers to organize content. Learn about other organizational short cuts, such as distributing objects to layers. In addition to motion, you can tween other properties using the Property inspector.

6.4 Creating frame-by-frame animations

Add slightly different graphic content on individual frames to create a frame-by-frame animation. You can use onion skinning to view two or more frames on the Stage at once; this feature helps you position the elements of a frame-by-frame animation.

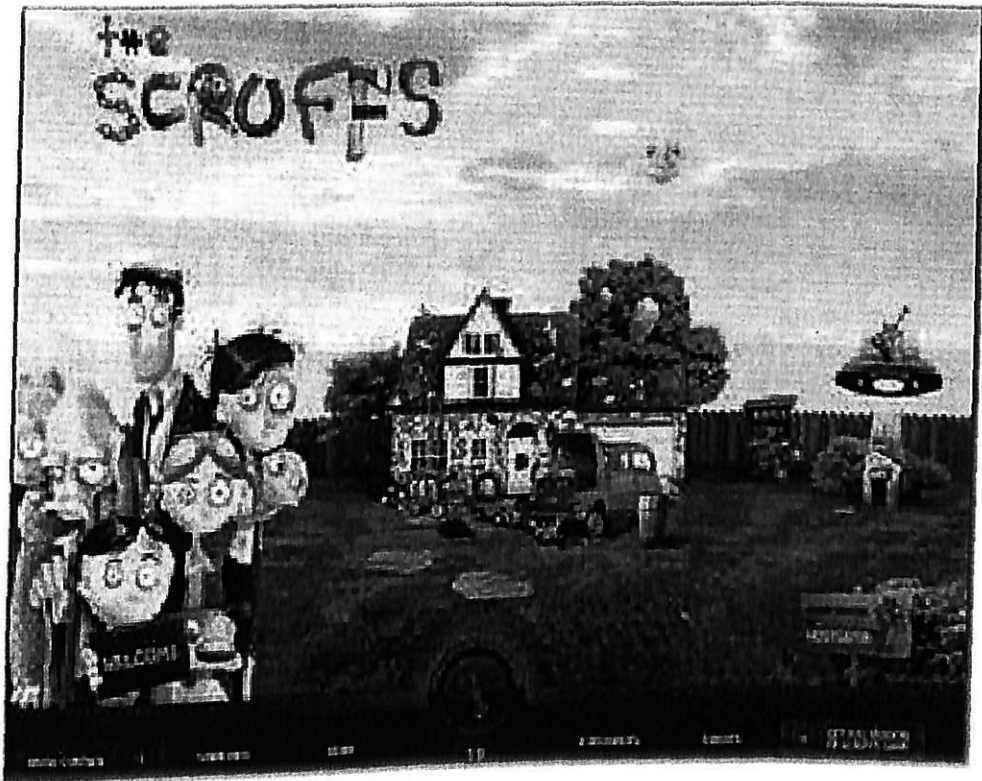


Fig.21(Adobe Flash Interactive Game Example)

6.5 Creating shape tweens

When you need to morph one vector shape into another we use a shape tween. To make more complex shape tweens, put different shape tweens on separate layers. Add shape hints to identify points that should correspond in the starting and ending shapes.

6.6 Working with the Motion Editor and applying easing

To improve quality of our animations with the Motion Editor as shown in Fig.17. To make animations move at a non-consistent pace, apply easing. Set the Ease property to make movement more realistic. Use the Motion Editor to precisely control the animated changes of multiple properties in a single tween and apply different ease values to properties of a motion tween. Choose from a variety of prebuilt ease settings to make your animations look more realistic.

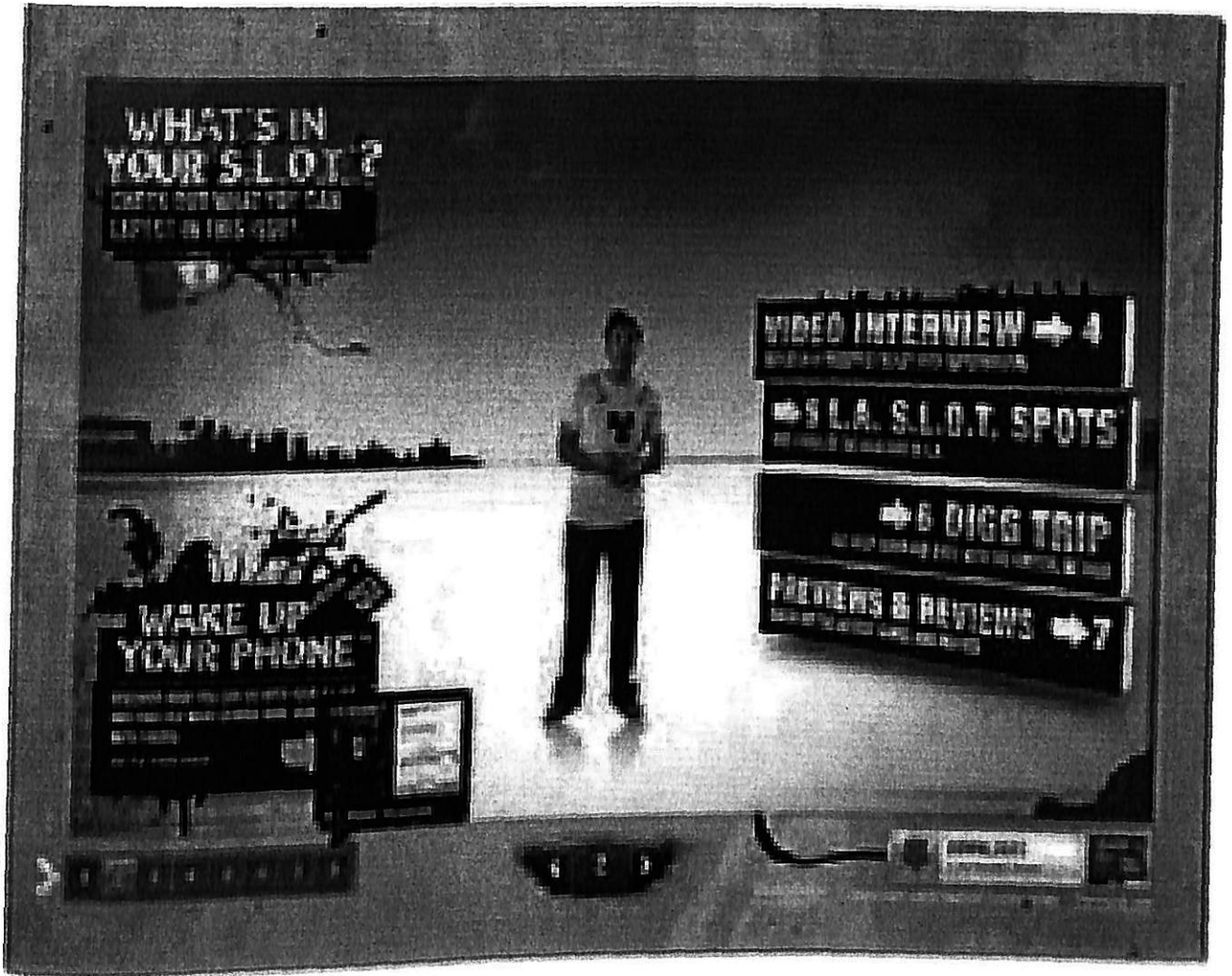


Fig.22 (Adobe Flash Interactive Website Example)

CHAPTER 7: INTERACTIVE BUTTONS

7.1 Making button symbols

To create interactive buttons by editing the four-frame timeline of button symbols. When creating buttons, such as nav bars use text, bitmap images, or vector shapes. You can configure buttons to link to an external website. Explore the anatomy of a button and learn various ways to create custom buttons. Be sure to test button functionality before publishing.

7.2 Updating the appearance of button components

We can programmatically apply custom images to buttons as well as using the Flash interface to customize the included Button components to ensure that they match your project's design.

7.3 Understanding mouse events

To control the action that occurs when a user clicks a button, create event handlers to react to various mouse events. You'll use the `addEventListener` method to associate event handlers with the specific mouse events that a button receives. Use the prewritten code in the Code Snippets panel to add interactivity to your projects without typing the code yourself.

7.4 Building Timeline navigation

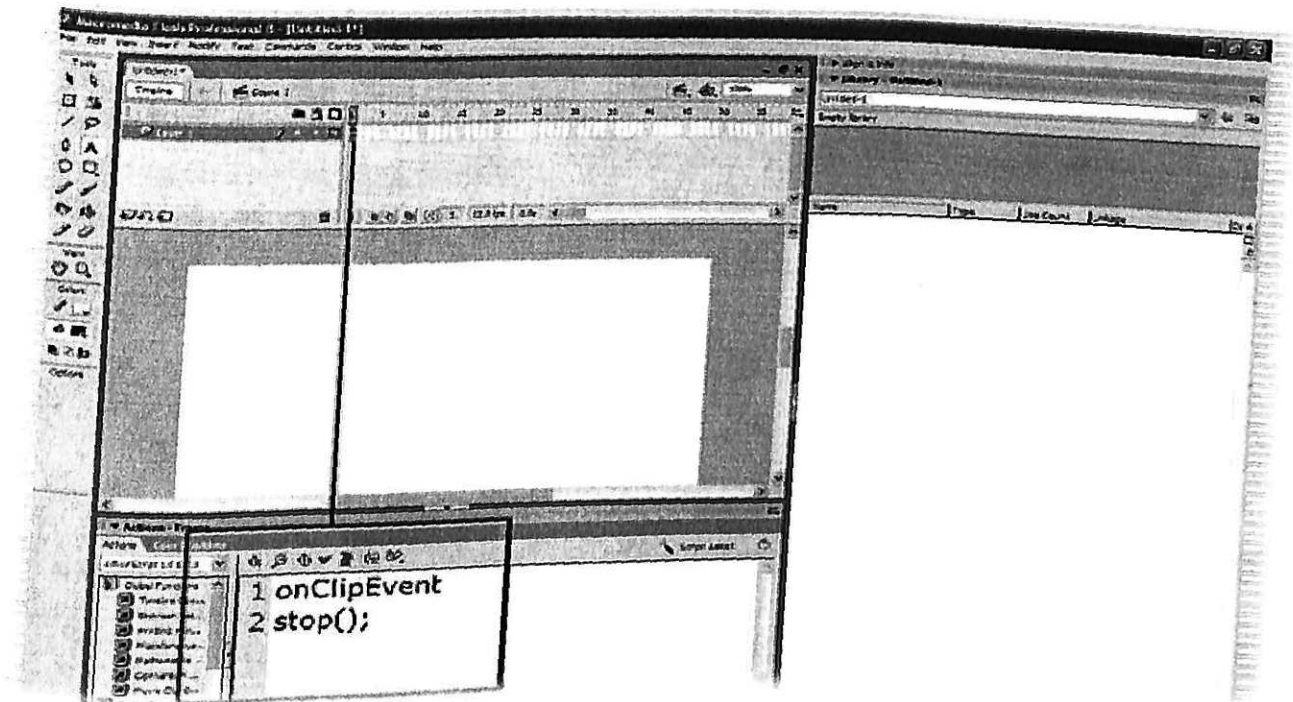


Fig.18 (Adobe Flash Action Script)

Purchase the Action Scriptcode snippets provided in Flash to create interactive Timeline navigation. Learn how to insert and edit code snippets to create presentations with imported Photoshop and Illustrator assets. If you are building an ActionScript project, you can control symbol instances with behaviors. In Fig.18.shownAction Script example on ClipEvent() function.

DIGITAL MEDIA

8.1 Recording, editing, and importing audio tracks

Use Adobe Sound booth to produce audio files for use on the web. After prepping audio files, import the sounds and work with them in Flash Use these tips when recording and preparing audio tracks to ensure that your Flash projects sound as good as they look.

8.2Importing video clips

After prepping the video files, import them into Flash and set the video playback options in the Property inspector. Usually you'll import video as an external file that is progressively downloaded, but learn about the three different methods for using video in Flash to choose the right option when importing your files.

Flash is increasingly used as a way to display and stream video clips on web pages. Flash is used as the basis for many popular video sites, including YouTube and Google Video.

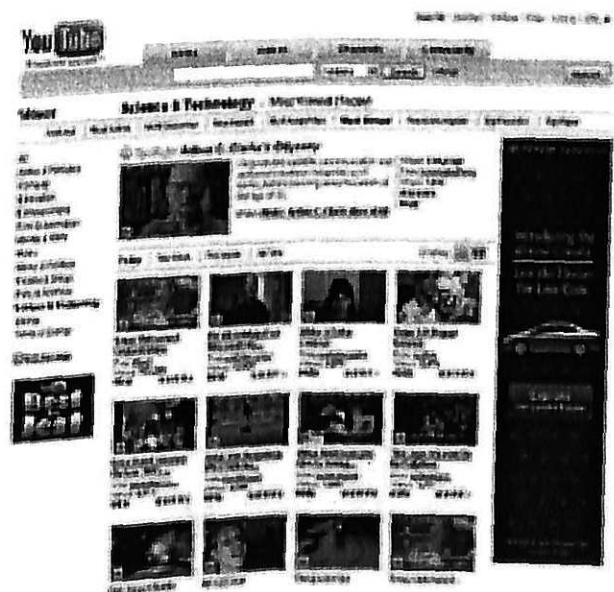


Fig.19 (Adobe Flash & Internet)

8.3 Working with video

If you are importing smaller video clips with a playback time of less than 10 seconds, you may choose to embed the video in the Flash file. Regardless of the import method you select when bringing the video in, you can use these instructions to add video to a web.

8.4 Using video components

Use the FL Playback component to easily play progressively downloaded or streaming video files. Customize the look and feel of the video controls by skinning the FL Playback component. Download and customize the prebuilt video templates to deliver complex, interactive video presentations.

8.5 Publishing online video

To deliver a seamless video experience on a website, you can also use the Open Source Media Framework. Add your video clips to the free Flash Media Playback video player, copy the generated embed code, and paste it into a web page. Learn how the video player works. To create more advanced video presentations with customizable controls, use the Flash OSMF Media Player template.

8.6 Adding cue points

Add video cue points to synchronize your project elements with the video footage. Learn the difference between encoded cue points and ActionScript cue points and how you can trigger events to occur at specific times in relation to the video.

MICROTRAINING IN ADOBE FLASH

9.1 Lesson1: Introduction

In this section, I gathered general information. It is interesting to those who are only acquainted with the editor of Adobe Flash CS4, and the editor of Adobe Flash CS5.

We will not engage in programming. The animation. Flash banners, cartoons, greeting cards. Draw and animate. Let's begin with software interface.

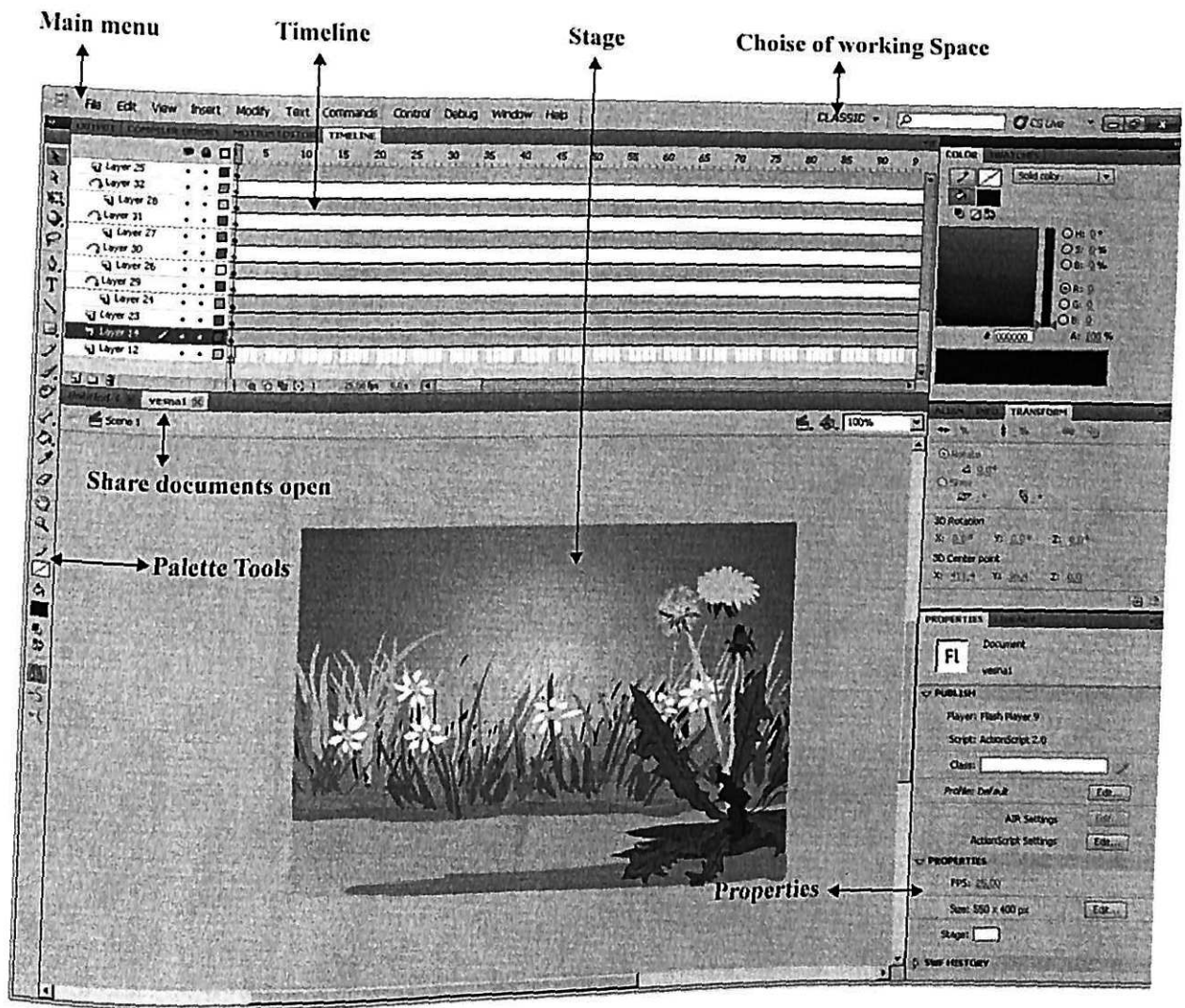


Fig.20. Interface Editor

Overview palette Tools

Tools are divided into groups. Next to the name of each instrument in round brackets "hot" key. Tool is located at the bottom of the palette settings area that allows control parameters and modes selected tool. Advanced customization tools are located on the palette Properties (Property Inspector).

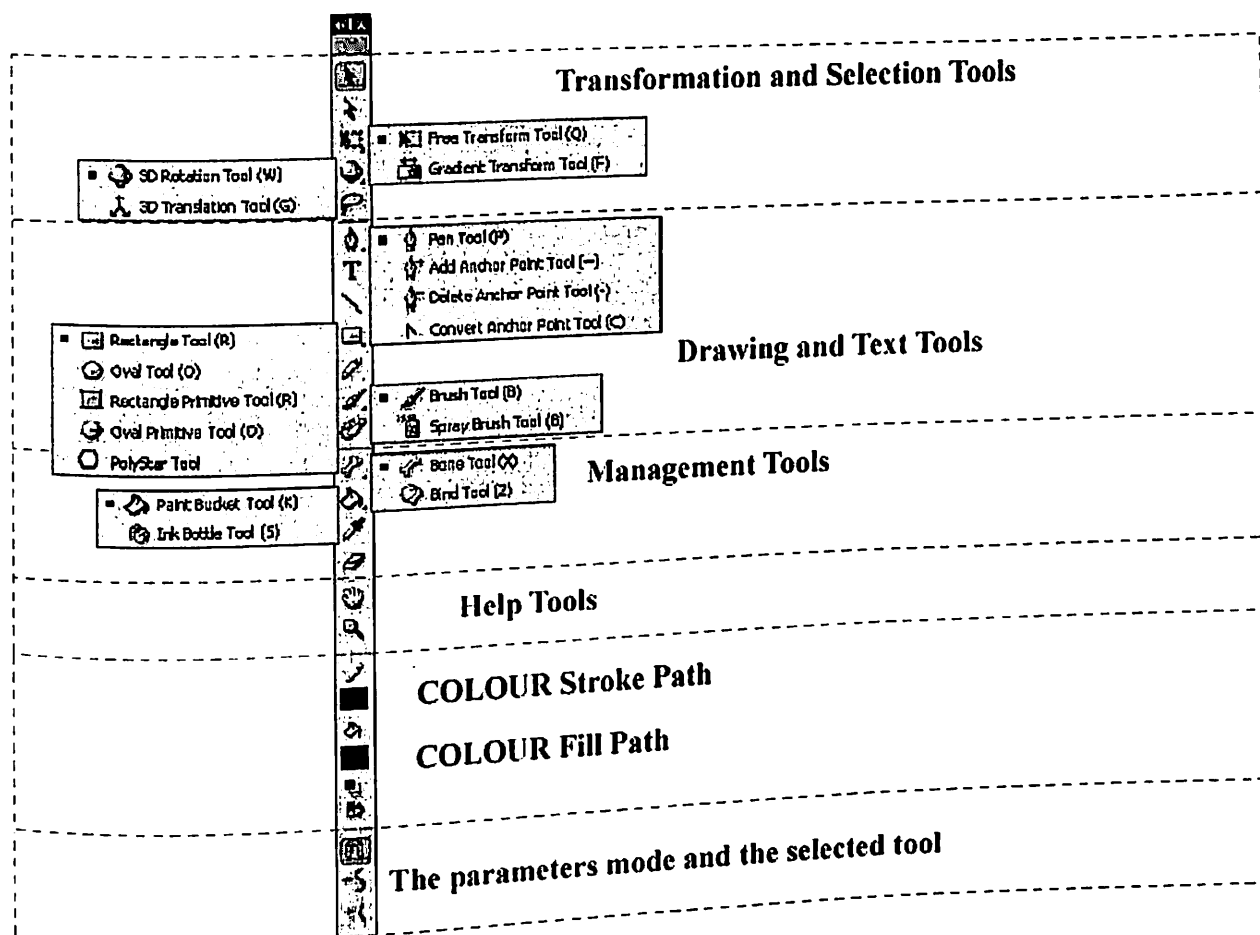


Fig.21. Tools (Instruments)

Drawing in Adobe Flash

Drafting

In the editor, Adobe Flash is used three modes of drawing:

Merge Mode

In this mode, Flash connects all the figures drawn where they overlap each other. If the figures have the same fill color, they merge into a single figure. If the fill colors were different, when you try to divide these figures is as if subtracting one from the other circuit

Treatment facilities

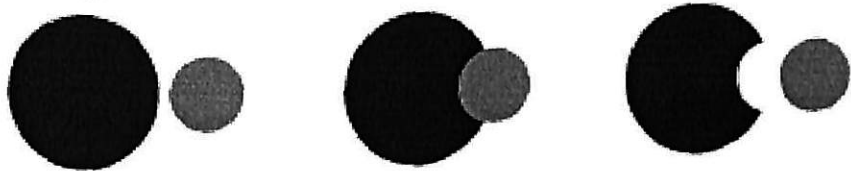
In this mode, Flash automatically connects drawing objects. They remain separated even when overlapped. To activate the object drawing, you must select one of the drawing tools in the settings area (bottom of the palette Tools) enable the Object Drawing (Drawing Objects)

Mode primitives

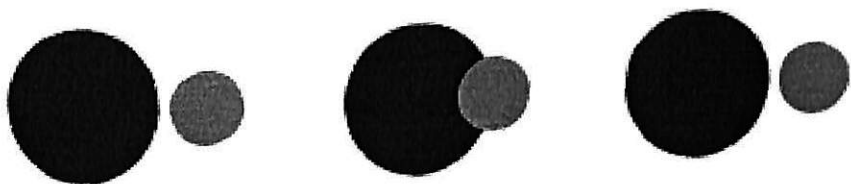
In Adobe Flash CS4, there are two tools that can create primitives - this Rectangle Primitive Tool and Oval Primitive Tool. Unlike ordinary objects, primitives allow you to change the shape parameters after the form is drawn. Tool Rectangle Primitive Tool at any time to change the corner radius of the drawn rectangle.

For the Oval Primitive Tool can manage internal diameter and position of the initial and the ending angle of the segment.

Merge Mode



Object Mode



Rectangle Primitive Tool

Oval Primitive Tool

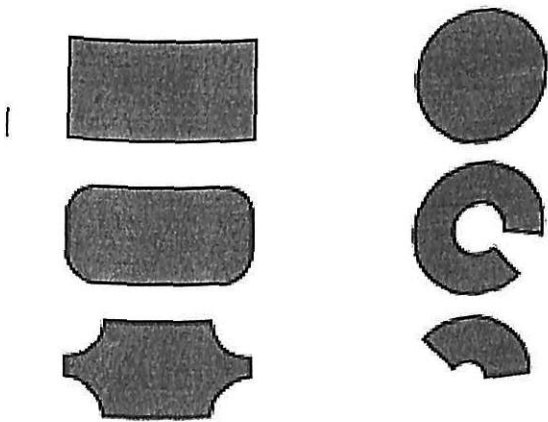


Fig.22. Drawing Mode

Designation Timeline control

Animation of different types is highlighted:

White - Empty frames (without animation)

Gray - Flip animation (Frame by Frame)

Light green color - Animation shape (Shape Tween)

Dark green color - layer poses inverse kinematics (Armature)

Violet - The classic tween (Classic Tween)

Blue - Animation motion (Motion Tween)

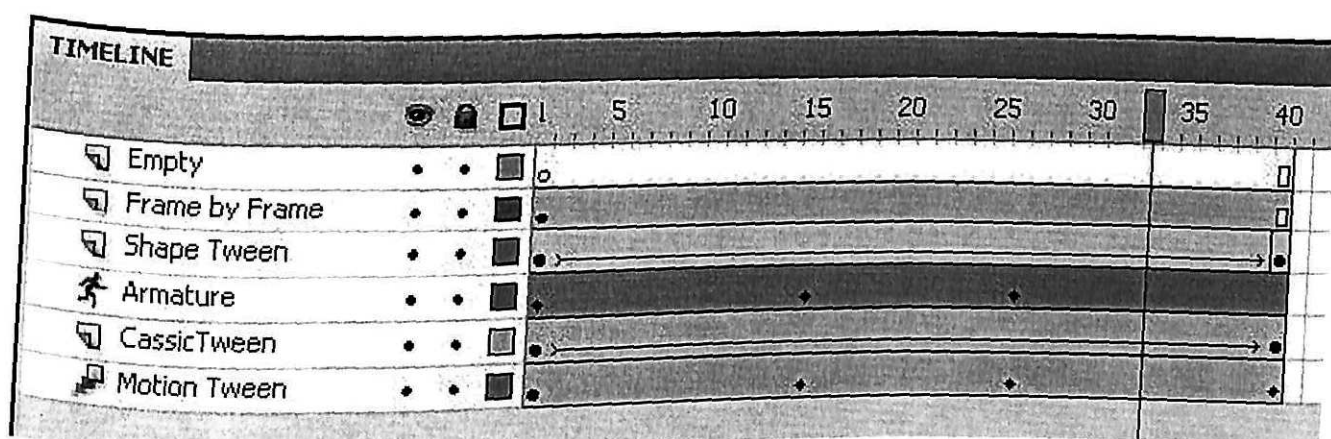


Fig.23. Timeline Control

Importing raster images

Import a bitmap, you can use the commands **File > Import > Import to Stage** or **Import to Library**. The difference between the two is that the team **Import to Library** places the image only in the video library, and the team **Import to Stage** right places a copy of the image on the stage video. In any case, the image gets into the roller Library. Host an image from the library; you can simply drag it onto the roller. To speed you can drag the desired image file in the workspace directly from the file manager.

If the bitmap image to use the context menu command **Break Apart**

Divide, it can be used as a bitmap fill just by clicking on it tool **Eyedropper Tool** (eyedropper) and "filling in" the desired object.

9.2 Lesson 2: Frame Animation

This is the most time consuming way to create animations. To look more smooth movement, it is necessary draws more frames. As previously drew cartoons, draws the blueprints for every move, and then combined, so it is here.

Working with frames. Get used to immediately use hot keys.

- Insert Frame (Insert intermediate block) - F5

- Insert Keyframe (Insert Keyframe) - F6

In the frame automatically copies the contents of the previous keyframe

- Insert Blank Keyframe (Insert a blank keyframe) - F7

You can change the sequence of frames by dragging them with the mouse.

Remove frames from the context menu Remove Frames (Delete blocks).

Select the required personnel. Press the right mouse button and choose the desired command. There are also copy and paste frames. Copy Frames, Paste Frames..



Fig.24 (6 hand positionsfor running)

Placed them in different frames. Timeline at the bottom of the palette are buttons, it's like tracing paper, and they allow you to see the object in multiple frames:

Onion Skin •-filled with a translucent

Onion Skin Outlines •-as outlines

After clicking the button, there are markers, which ~~are~~ indicate the number of frames displayed.

They can be moved, also set the number of frames displayed by pressing button Modify Onion Markers.

This portrait was made entirely non-modal, ranging from 1 frame I just painted a portrait, but Essential several lines, I press F6. A new frame, the previous image is automatically transferred to the frame, and I just had to draw on.

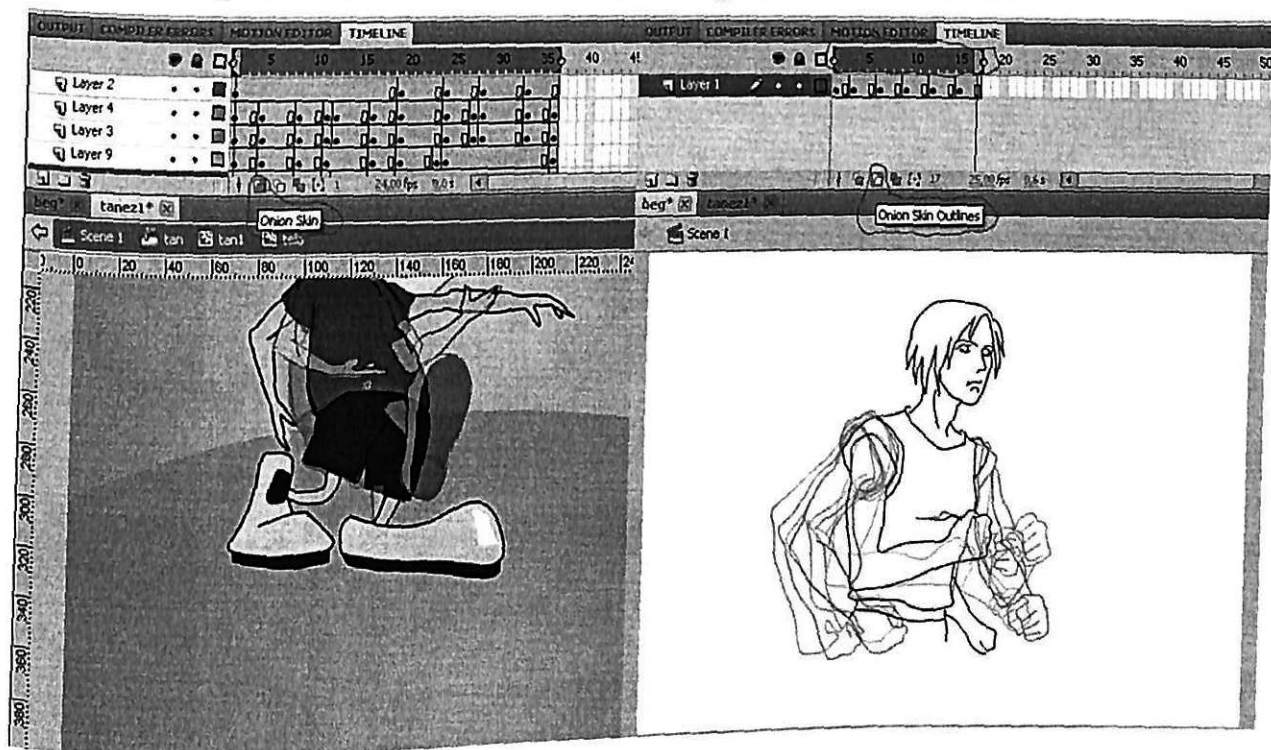


Fig.25 (Animation process)

9.3 Lesson 3: Classic Tween and the transformation point. Dancing flower.

First, draw the petals. Tool Oval (D) draws an oval. The cast I chose white and gray contour. Double-click on the object. We will stand and outline and shading. Press the Alt key and move the object, we have turned a copy. Select the tool Free Transform Tool. Rotating an object is relative to the transformation point (white circle), and rotate slightly oval. Repeat this action, placing the petals in a circle.

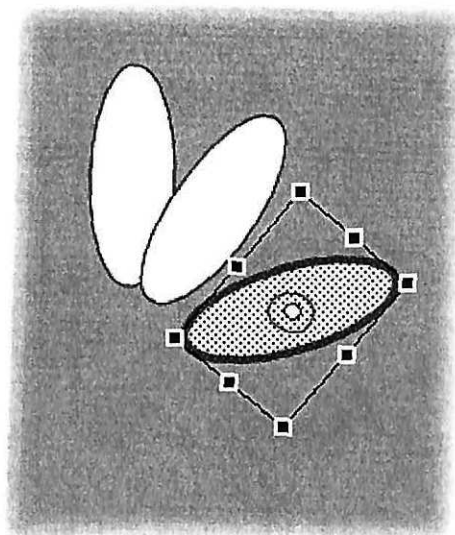
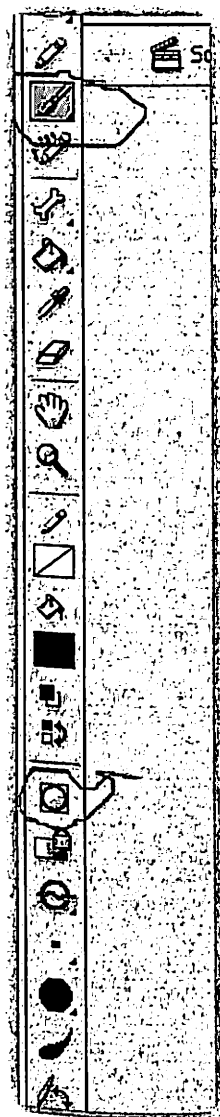


Fig.26 (Drawing Leaves)



Draw a circle of yellow, outlined in orange and put on the petals. If you now move the circle, you will see that part of the image which is under the terms disappeared. Pictured in the merge mode. More details in the introduction.

To enable or disable drawing objects, you need to select a drawing tool at the bottom of the palette and click on the button.

Drew a little face flower. Tool Brush Tool (Brush) individually painted stem and leaves.

Tool Brush Tool (Brush) at the bottom of the palette Tools (Tools), you can select:

- Drawing mode (Brush Mode)
- The size of the brush (Brush Size)
- The shape of the brush (Brush Shape)

The size of the brush depends on the scale of the window.

That is, Brush with the same reduction in the size of the window is larger. And with the approach of an object, more subtle.

Fig.27

(Brush Tool)

Create a movie clip for the animation.

Select the flower itself, press F8. We have a table appears Convert to Symbol. Select the Movie Clip and give it a name.

In this panel, there are several options

- Movie Clip (Clip) designed to store pieces of animation
- Graphic (graphic symbol) is mainly designed to store the items, which are not contained within its own animation (such as bitmaps)
- Button (Button) allows you to make an interactive movie.

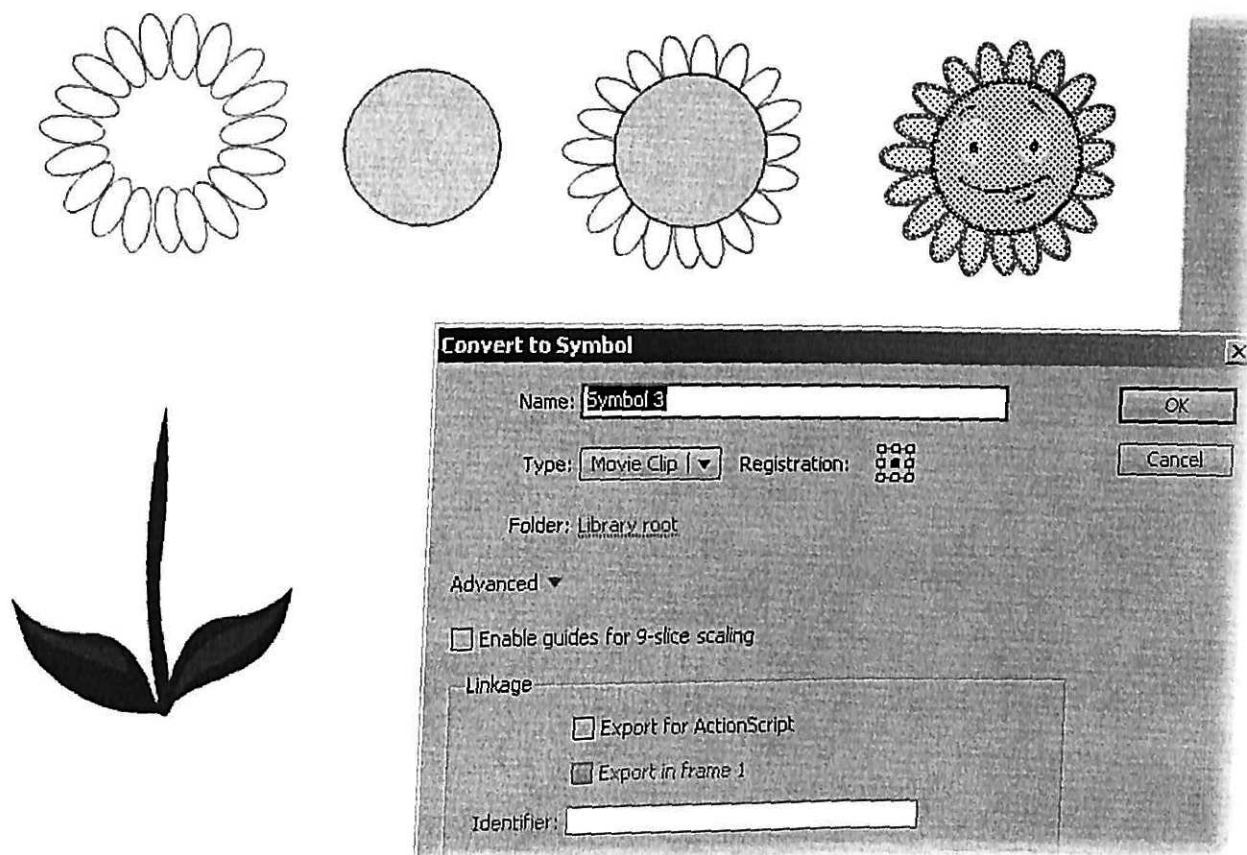


Fig.28 (Sun Flower)

So did a stalk with leaves. They automatically appear in our library. Now we quietly remove our movies.

Working with library symbols «Library»

The library contains all of the video that we put into the movie. (Movie clips, buttons, graphics, audio and video.). To move an object from the library it needs to be easy to move with the mouse to the right place stick.

Now proceed to the animation.

On the first layer put the stem. Select the transform tool and drag the transformation point down to the base of the stem.

We go to the bar with the mouse select frames 15 frame press F6, too, want a 25, 35 and 45 overs. Select all the pictures click on them, right-click and

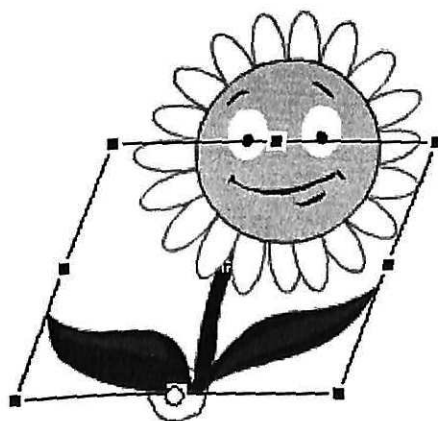


Fig.29 (Diagonal position)

select the Classic Tween. In the 15th frame of the Free Transform Tool decrease in height and move to the right on the top line. At 35 frames do the same, only shift to the left. Create a new layer. Sway him the flower itself. Put the stalk. Repeat the steps with the staff. Just do not use the tool Free Transform Tool. And just a 15 and 35 frames to transfer the flower stalk.

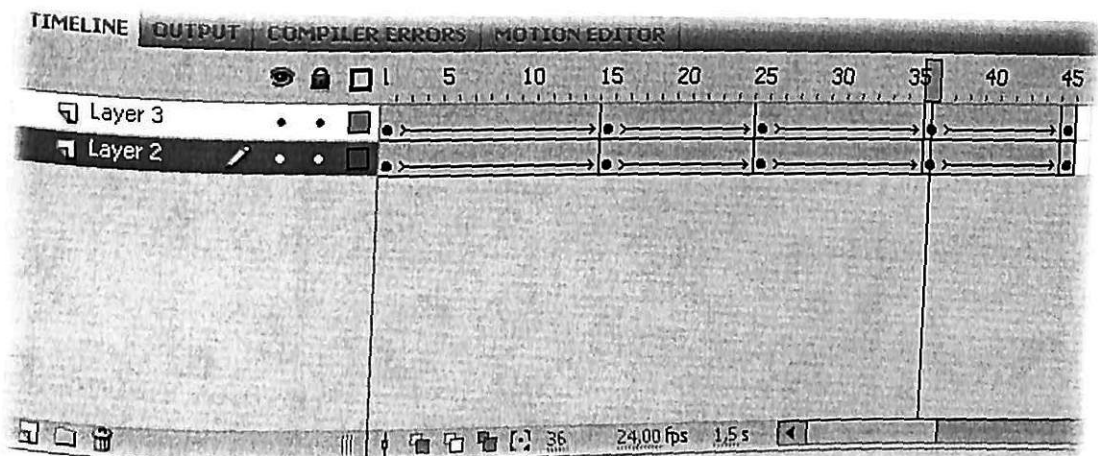


Fig.30 (Timeline Keyframes)

9.4 Lesson 4: Create an electronic scoreboard.

Tool Text Tool, you want us to recruit the text.

Edit the properties of the text, you can use the palette Properties. (Property Inspector).



Fig.31 (ElectronicScoreboard)



Create a new layer above the inscription. Draw a white circle with no stroke. Select and translate into a movie clip (Movie clip) F8. And now with the **alt** distribute it in the text.

Fig.32(Board example)



Fig.32(Movie layer)

Delete the text layer. Select all of our circles and translate into movie F8. Now with duplicate **Alt** Movie clip to the right. Now, we see that the two movie clips is the distance.

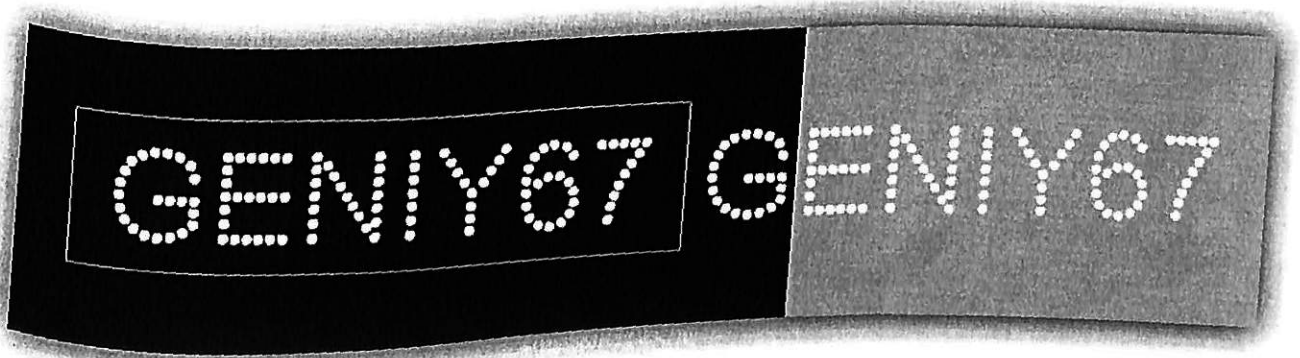


Fig.34 (Alpha 0 fill)

To make the text went smoothly; with the second movie clip I draw a rectangle the same length as the distance between the movie clips. Fill translate Alpha-0. All single out again and again translate into Movie clip F8.

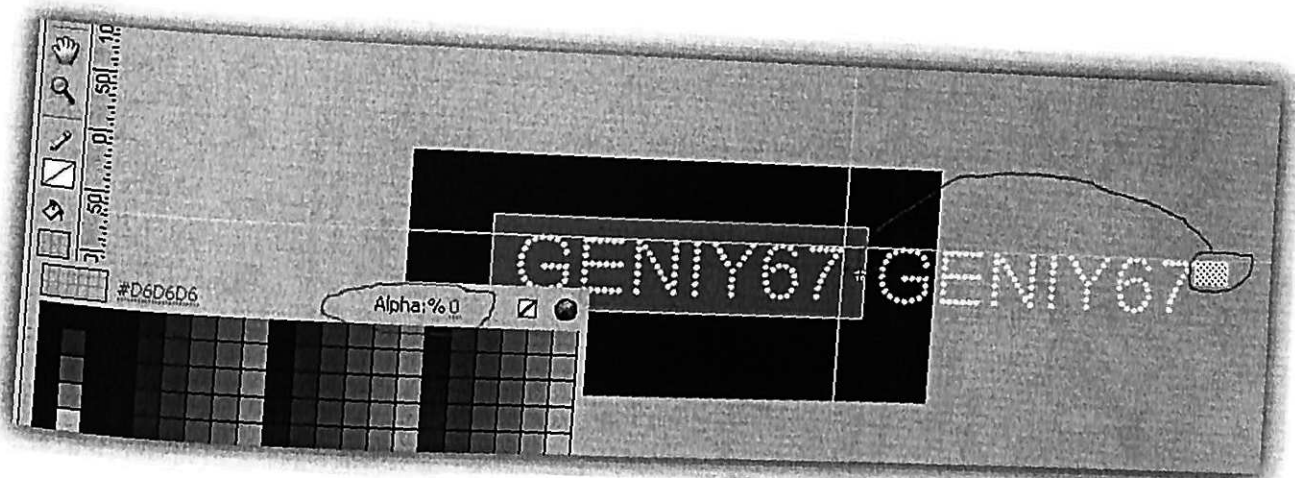


Fig.35(Classic tween motion)

On the layer with the frames in the frame 30 put F6. Select all the pictures click on them, right-click and select the Classic Tween. In the last frame, move to the left so that the second inscription into place 1. If you test (Ctrl + Enter), you will notice that twitches. To clean it, put a frame at 29 F6. A 30 remove. To do this, select the image, press the right button on it and select Remove Frames (Delete blocks).

If you are testing your, you will see that the text is in the whole length of the field. It is necessary to limit the size of the board. Above the layer with the words, create a new layer. Draw a rectangle on it with the board.

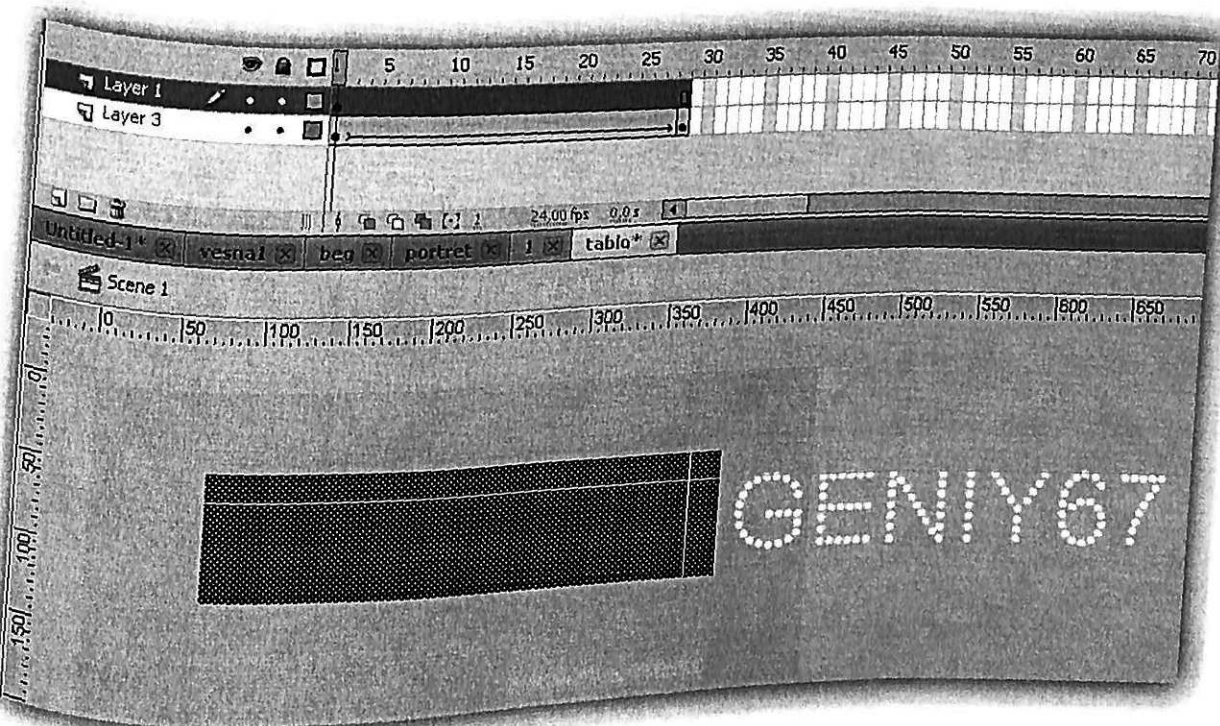


Fig.36 (Insert Frames)

Right-click on the layer and select Mask. Append the text layer to layer with a mask.

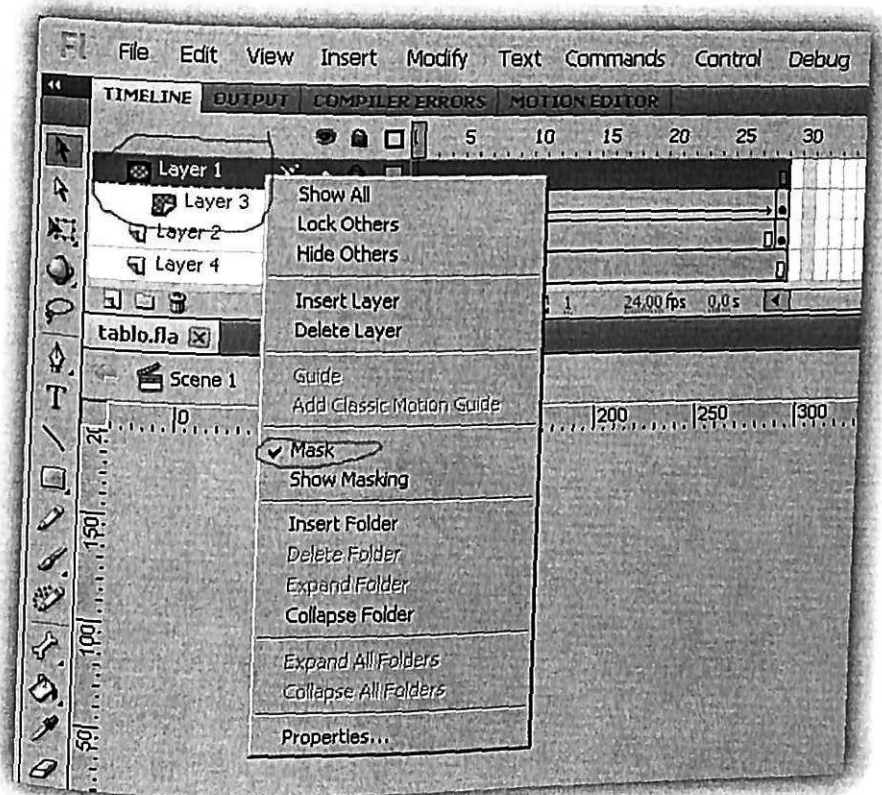


Fig.37 (Timeline & Layers)

9.5 Lesson 5: Animation shape (Shape Tween)

1. When one form of animation path can be converted into another. It cannot be applied to characters or bitmap image. The object must always be a vector.

Create a layer for the animation. In frame 1, draw a square. Put the F6 key frame 20. Draw a circle in the other place, and remove the square. Now highlight the scale with the staff and press the right mouse button, choose Shape Tween. The scale will turn green. It is possible to make not only the transition from one form to another, but also the transition color.

Select the first frame can configure the following settings in the panel PROPERTIES:

Ease (acceleration / deceleration)

Blend (conversion):

Distributive - form a smooth, Angular - largely remain straight lines.

2. This type of animation does not always give predictable results. But sometimes the result is beautiful.

3. You can convert a single loop of a few.

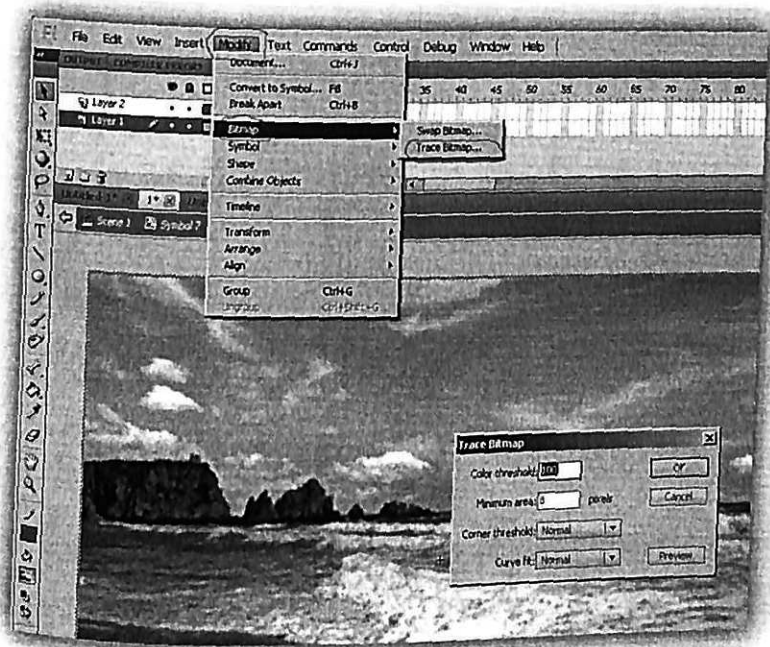


Fig.38 (Single loop of a view)

4. As I wrote above, it does not work with images. But we'll trick him.

Place the image number 1 on the field, in 24 frames, put the key F6. And 55 also set a keyframes. Go to the 24. Select and tracing.

In 55 delete the image from the library and drag another photo. Put another keyframes at 56 and 75 frame press F5. 55 In tracing the image again. Highlight footage on a scale from 24 to 55. Convert to Shape Tween. And testing.

9.6 Lesson 6: Looping motion background.

This tutorial will show us how to simulate movement.

1 Draw the background. Note that the left and right edges background should be the same. translate into movie F8.



Fig.39 (Draw background)

2 From Ait duplicate background to the right. All select and translate a Movie Clip



Fig.40 (Duplicate background)

3 Put the keyframe and select Context

Menu Create Classic Tween (Create classic tween). In the last shot move the background to the left.

To the background is not twitching in the penultimate frame again put a key frame F6, and remove the last frame.

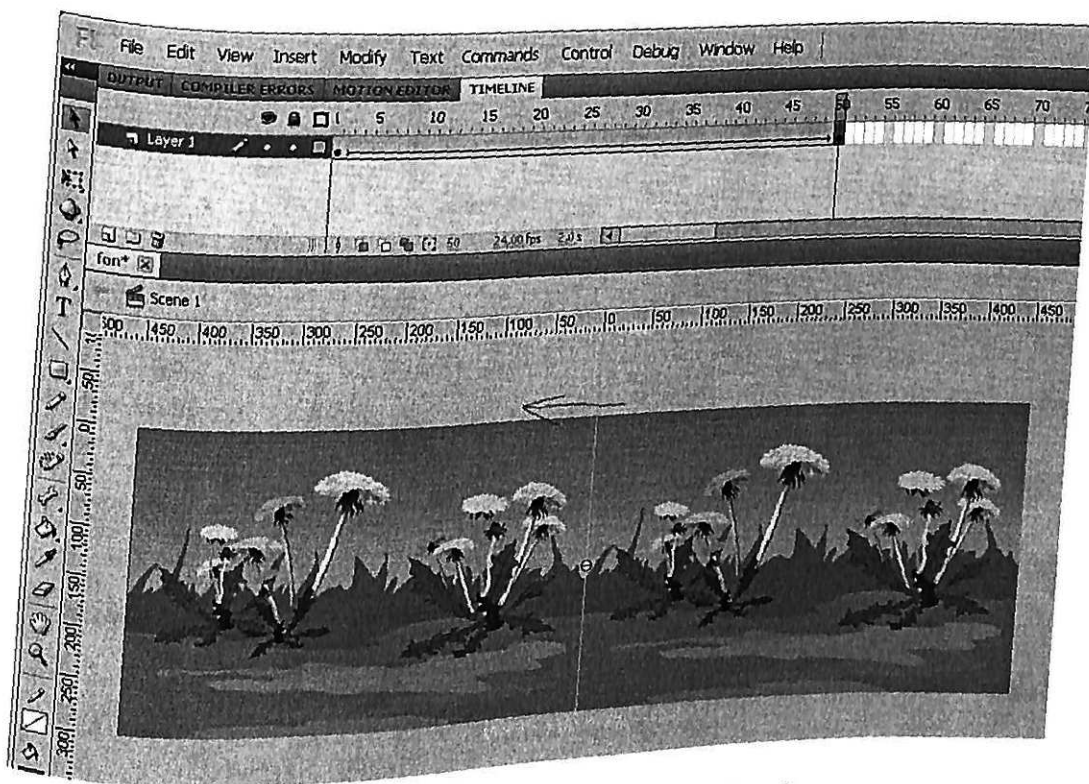


Fig.41 (Classic tween motion)

9.7 Lesson 7: Image Change

I want to show a simple example of changing images or pseudo rotation. I have prepared a lot of icons of the same size, put up 5 icons in a row. Each icon is on its own layer.



Fig.42 (Image change)

Translated by icons in the movie clips. Then set keyframes, F6: № 5, 39, 44.

In the 1st and last frame of the instrument Transform Toll, greatly compress the image.

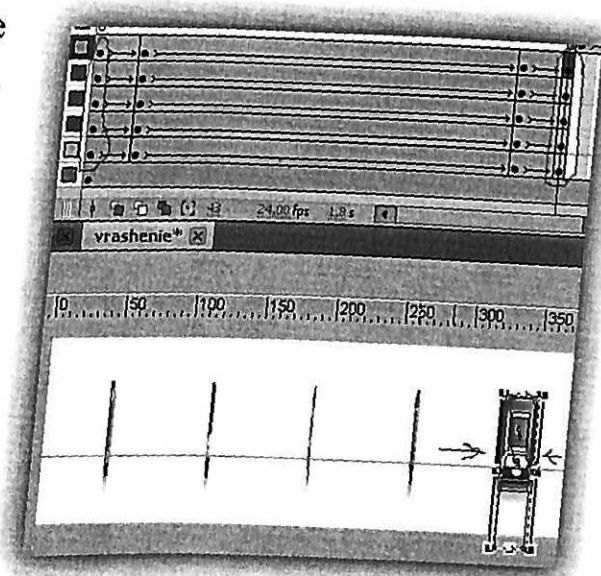


Fig.43 (Keyframes F6)

Repeat this operation for all the other pictures.

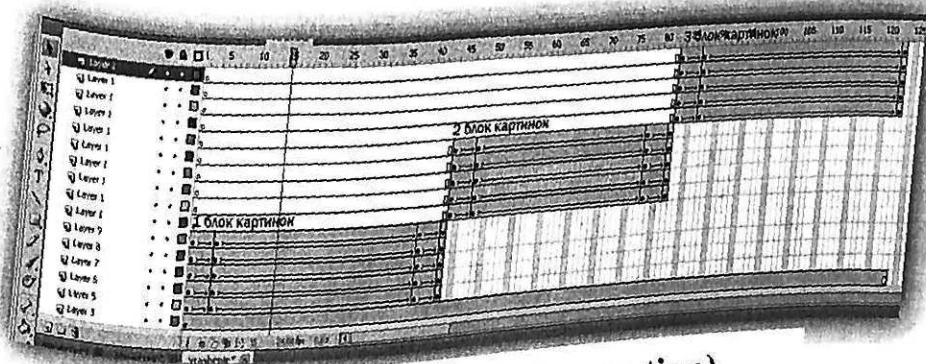


Fig.44 (Repeat operation)

9.8 Lesson 8: Animation text noise

Creating a "noisy" text or text with animation interference.

Dimensions: 300 x 200 (but not important), Background color # 000000, Frame rate 24 fps.

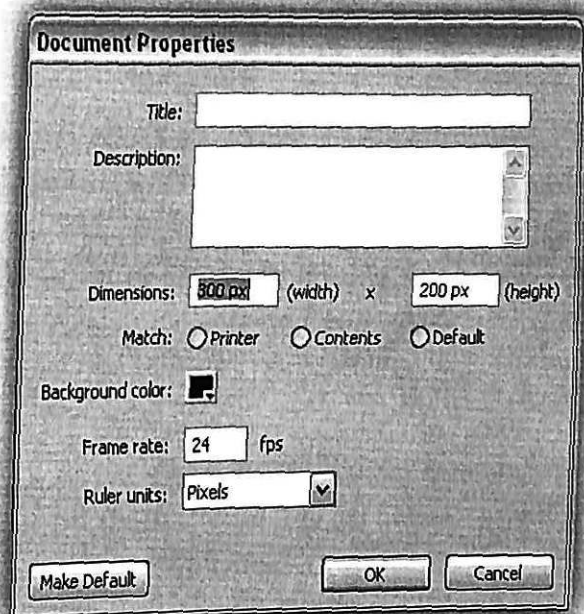


Fig.45 (Properties)

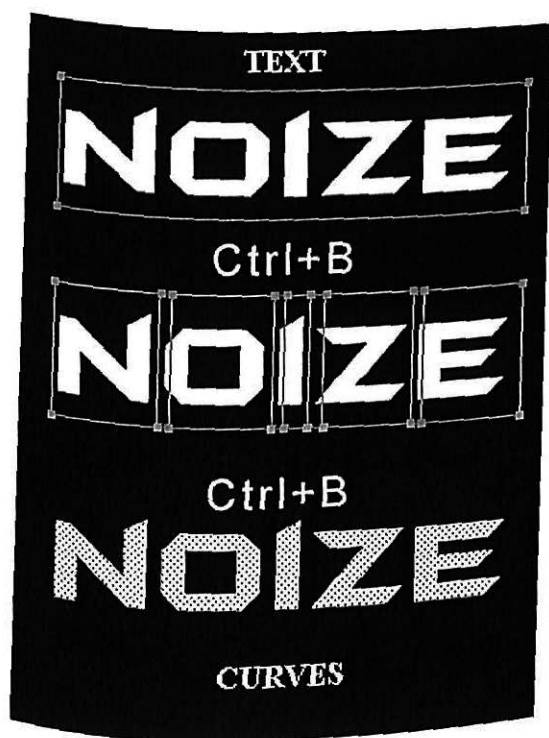


Fig.46 (Text examples)

We extend such a "quiet" state of the text frame to the twentieth and twentieth frame press F6 (create key frame), it is with the twentieth frame will start at the first frame of our interference.

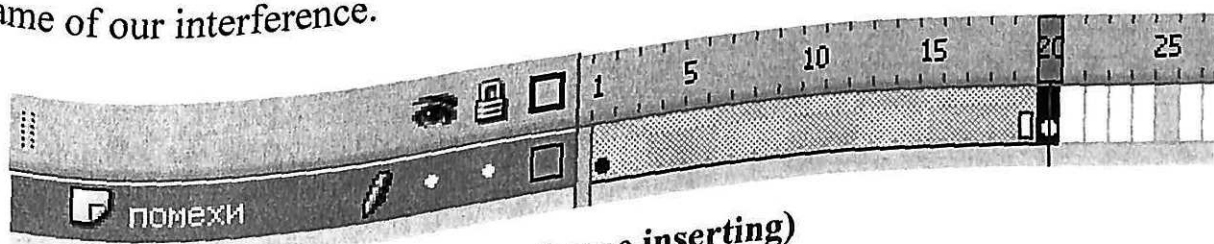


Fig.47 (Keyframe inserting)

Splitting.

2. We cut the text into parts (in this case, do it horizontally.) Take the Selection Tool (V) and select the bottom part of the word. Move to stand out a little strip down and sharply to the left or right. We perform this operation just text. Now randomly select pieces of text, hold down Ctrl + Shift, to highlight a few pieces in different places, change the Alpha to 10-50% less than 100% (ex 70%)

Animation.

3. We now have done for the first shot, "noisy" animation. Now we create the next keyframes (F6). It is assumed that it is clear how to do the interference of the second step (Cutting). The only thing that we change this situation strips (the first frame of the animation - the strip to the left, the second - to the right) and the transparency of their pieces.

The more training, the better the noise that is created by a third frame of the animation, etc.

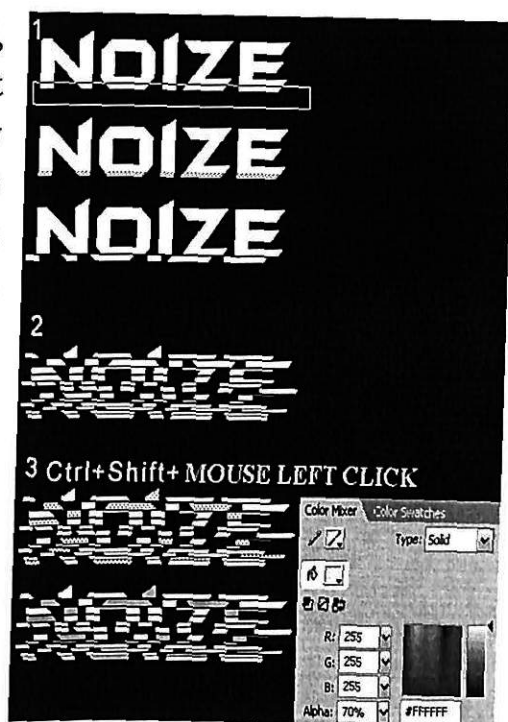


Fig.48 (Text effects)

Now go back to the twentieth frame (the first frame of "noisy" text animation). Select the whole text, or rather its interference. We take the Free Transform Tool (Q) and use it all kinds of transformation and deformation of the text. We pull for points! Doing it for the other frames.

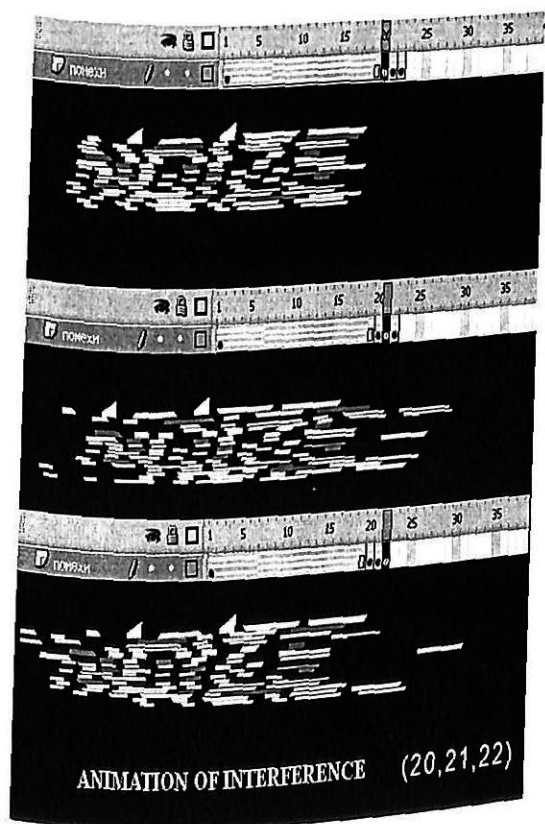


Fig.49 (Transform tool)

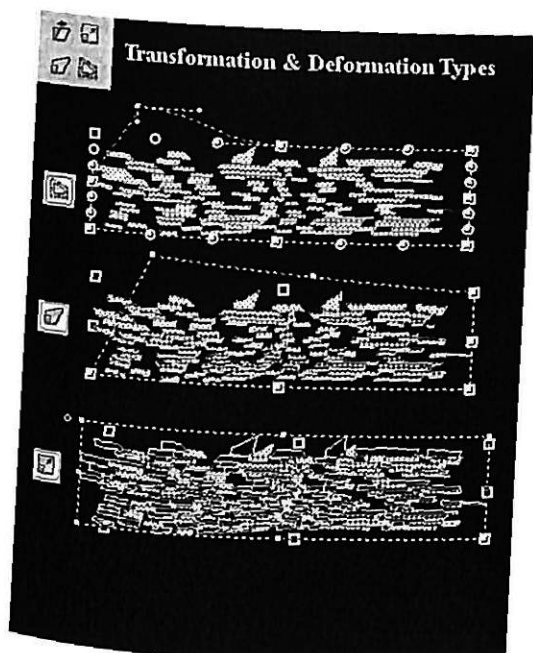


Fig.50 (Last position)

Finish can play the resulting interference (Ctrl + Enter).Fig.44.

It is also possible to make a print greater effective interference.

9.9 Lesson 9: Envelope Icon

I will try to tell you how to create an icon mail envelope. Sure, it sounds a little trite, as lessons to create it already has a lot of stock. But I'd like to show you how I see it executed. Perhaps it is useful to you in any way.

The basis of the envelope.

I advise you to draw on a dark desktop background. The envelope will be predominantly in bright colors. Name the layer simply: "envelope." After you draw a rectangle (Rectangle Tool (R)) color # EEEEEE size 85h56 pixels. Copy and paste the rectangle created in the same place where the first. Do not deselect with a copy of the rectangle, open the tab Modify> Shape> Expand Fill and set the parameters of which are given in the screenshot below. To apply a small copy of the color # 999999. Now copy the smaller rectangle and again tab, select

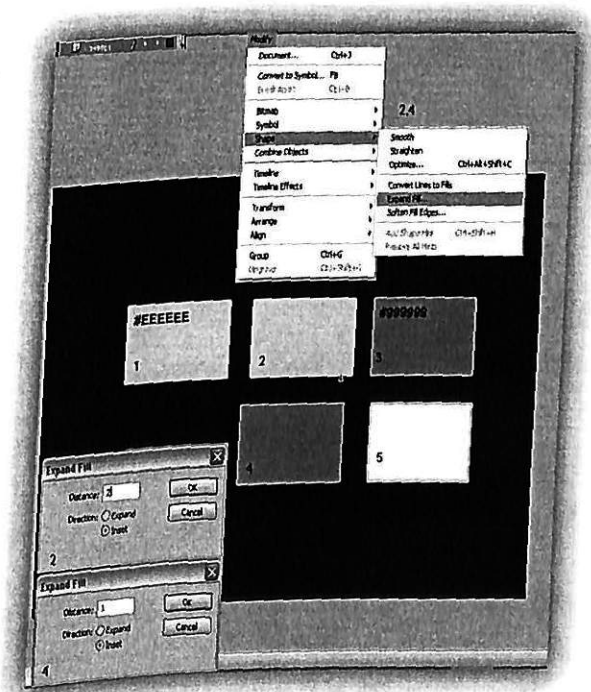


Fig.50 (Basic envelope)

Modify> Shape> Expand

Fill with the parameters shown below. For this shape until the color does not matter.

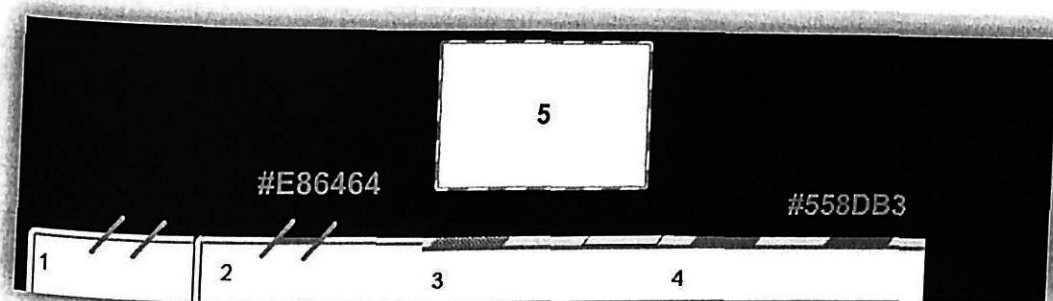


Fig.51 (Envelope draw)

Outlining the envelope.

Divide the circuit envelope tool to build lines (Line tool (N)). A smaller portion of the contour fill it with color #E86464. Now select and remove (delete) the line with the Selection tool (V). Select the shaded part of the circuit envelope immediately after we press Ctrl + Shift keys and the cursor shifts the shaded area (with the key combination is squeezed), but the color chosen for her #558DB3. And so distribute these colored area around the edge (to speed the process you can select and move them in pair

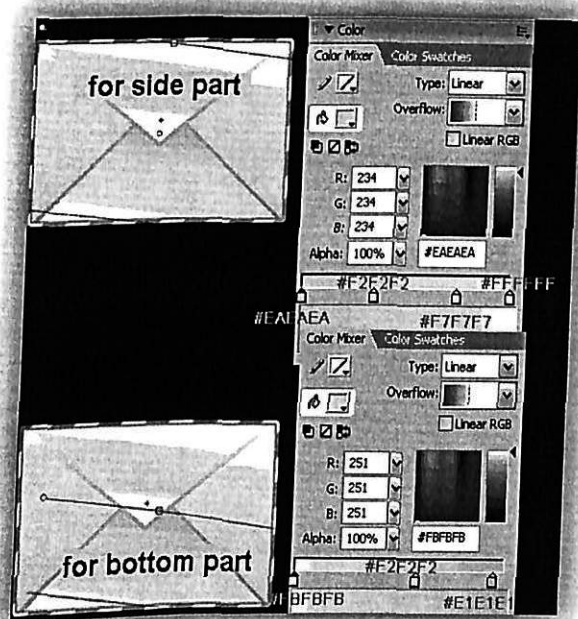


Fig.52 (Both Sides of envelope)

The inner side of the envelope.

Divide the tench (Line tool (N)) envelope so that they intersect near the middle of the envelope. Select the separated piece of the envelope and fill it with a linear gradient with your settings and location After remove the line that you created earlier for the separation of the envelope. Copy the flooded part. Now select the upper and lower it down a bit, while not moving

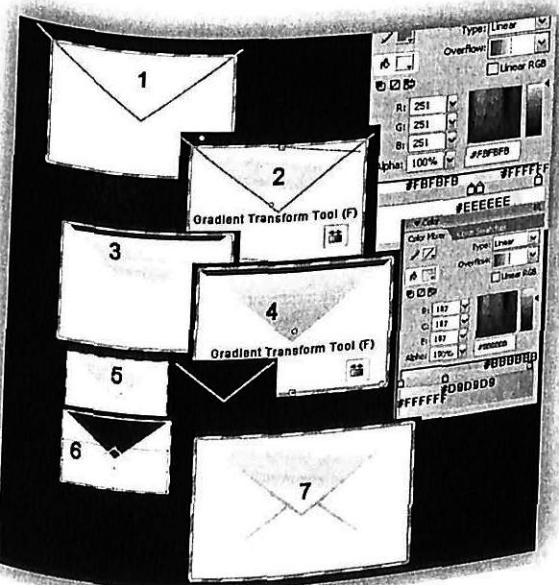


Fig.53 (Line tool)

the X axis still selected, fill it with a linear gradient with your settings and location. And now insert, copied part of the envelope. Fill any gaps between the parts of the fill line. As a result, we obtain the characteristic feature of the envelope. Copy this line and inserting it back until we remove the side. Now cut out the top of the same envelope. The line, which was removed, flip the upward angle (using a tool Free Transform Tool (Q)) and place in an envelope. Take the eyedropper tool (Eyedropper tool (I)), is not still selected with the bottom line, press it on the line at the top. We put into place the top of the envelope. Now it is necessary to fill in the remaining three colors of the envelope, which broke away due to established lines. The colors and their locations are illustrated below.

Stamp.

Name the new layer "stamp". It creates a circle within a circle (with a tool Oval tool (O)). The resulting circles convert to curves and highlighting, apply the tab Modify> Shape> Expand Fill (1 px, Inset). After a copy of the n-th number of times, turning and moving them. And write the word (Text Tool (T)) on the stamp. I wrote the word «mail». Immediately select it and convert to curves (double press ctrl + B for it) (if you change the word, then this step is not necessary to repeat!).

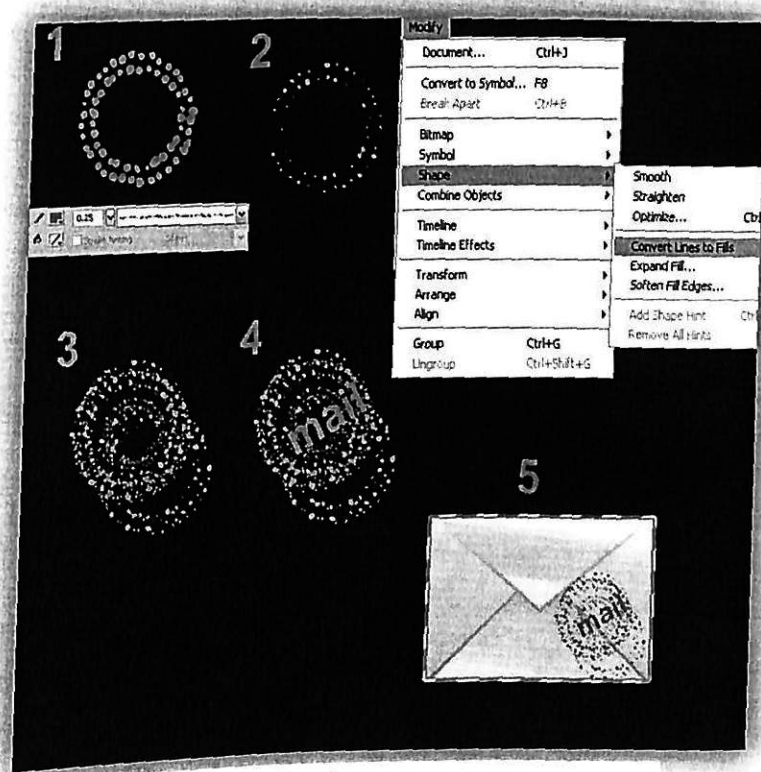


Fig.54 (Drawing Stamp)

The resulting transfer to the center. Selecting the entire stamp, move it to the envelope (layer "stamp" top layer "envelope", they are not on the same layer!).

Shadow.

Now you can remove the dark background and working to put white paint as a shadow. Have a layer below all. Draw a rectangle at the bottom is equal to the width of our envelope with the right colors and the arrangement of the linear gradient. For the convenience of hiding layers / make them visible only by their contours to scale our shadow behind the envelope.

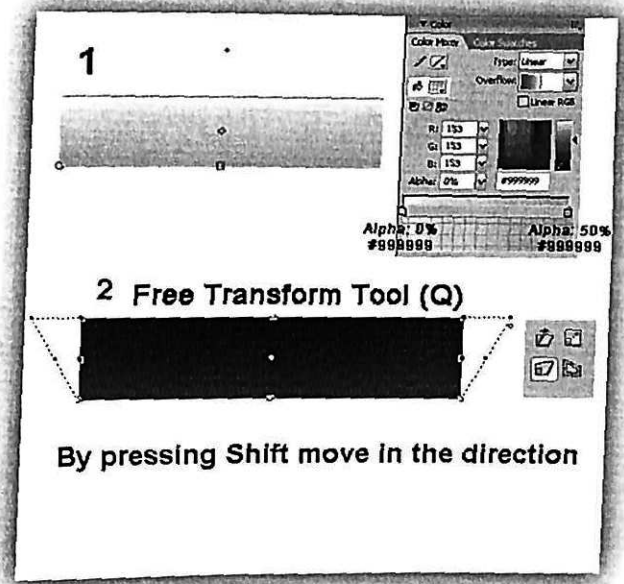


Fig.55 (Free Transform)

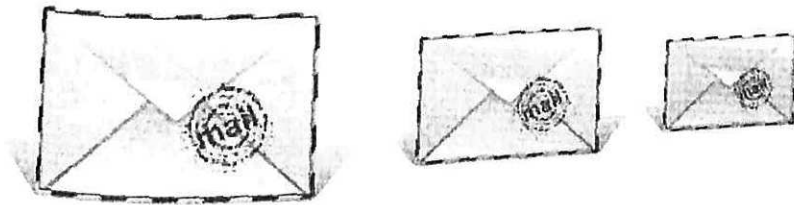


Fig.56 (Ready Envelope)

CONCLUSION

In this study were given examples of microtraining and shortly briefing of educating in by using new study technologies. There is a big difference between education system of the past and modern education technologies. That's why micro training are very useful in such kind of education. Memorized learnings are popular and not suitable for our country at all.

Kazakh –Turkish high School for gifted girls in Astana was my testing area for Micro-training in Adobe Flash program. At IV term of educational year 2012-2013 this project were experienced. In that experimental period we are expecting a big difference of knowledge and students self-study. Microtrainings of Adobe Flash would prepare on a Local Web Page with Lectures and Training examples inside. Students would study with prepared lessons and tasks after make examples and would have opportunity to make something new.

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