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УТВЕРЖДАЮ

Заместитель директора

по учебно-методической работе

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« _____ » _____ 20 ____ г.

**Контрольно-оценочные средства
по учебной дисциплине**

СГ. 02 ИНОСТРАННЫЙ ЯЗЫК В ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ

основной профессиональной образовательной программы (ОПОП)

специальности СПО

11.02.17 Разработка электронных устройств и систем
базовой подготовки

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1 ПАСПОРТ КОНТРОЛЬНО-ОЦЕНОЧНЫХ СРЕДСТВ

В результате освоения дисциплины обучающийся

должен уметь:

- строить простые высказывания о себе и о своей профессиональной деятельности;
- взаимодействовать в коллективе, принимать участие в диалогах на общие и профессиональные темы;
- применять различные формы и виды устной и письменной коммуникации на иностранном языке при межличностном и межкультурном взаимодействии;
- понимать общий смысл четко произнесенных высказываний на общие и базовые профессиональные темы;
- понимать тексты на базовые профессиональные темы;
- составлять простые связные сообщения на общие или интересующие профессиональные темы;
- общаться (устно и письменно) на иностранном языке на профессиональные и повседневные темы;
- переводить иностранные тексты профессиональной направленности (со словарем);
- самостоятельно совершенствовать устную и письменную речь, пополнять словарный запас.

должен знать:

- лексический и грамматический минимум, относящийся к описанию предметов, средств и процессов профессиональной деятельности;
- лексический и грамматический минимум, необходимый для чтения и перевода текстов профессиональной направленности (со словарем);
- общеупотребительные глаголы (общая и профессиональная лексика);
- правила чтения текстов профессиональной направленности;
- правила построения простых и сложных предложений на профессиональные темы;
- правила речевого этикета и социокультурные нормы общения на иностранном языке;
- формы и виды устной и письменной коммуникации на иностранном языке при межличностном и межкультурном взаимодействии.

1.2. Формируемые компетенции:

ОК 02. Использовать современные средства поиска, анализа и интерпретации информации и информационные технологии для выполнения задач профессиональной деятельности;

ОК 04. Эффективно взаимодействовать и работать в коллективе и команде;

ОК 05. Осуществлять устную и письменную коммуникацию на государственном языке Российской Федерации с учетом особенностей социального и культурного контекста;

ОК 09. Пользоваться профессиональной документацией на государственном и иностранном языках.

ПК 1.1. Осуществлять подбор технологий, технического оснащения и оборудования для сборки, монтажа и демонтажа элементов электронных блоков, устройств и систем различного типа.

ПК 1.2. Осуществлять сборку, монтаж и демонтаж элементов электронных блоков, устройств и систем различного типа.

ПК 1.3. Эксплуатировать автоматизированное оборудование для сборки и монтажа электронных блоков, устройств и систем различного типа.

ПК 2.1. Составлять электрические схемы, проводить расчеты и анализ параметров электронных блоков, устройств и систем различного типа с применением специализированного программного обеспечения в соответствии с техническим заданием.

ПК 2.2. Выполнять проектирование электрических схем и печатных плат с использованием компьютерного моделирования.

ПК 3.1. Составлять и использовать алгоритмы диагностики работоспособности электронных устройств и систем различного типа.

ПК 3.2. Проводить стандартные и сертификационные испытания электронных устройств и систем различного типа.

ПК 3.3. Осуществлять настройку, регулировку, техническое обслуживание и ремонт электронных устройств и систем различного типа.

ПК 4.1. Составлять алгоритмы и структуру программного кода для микропроцессорных систем.

ПК 4.2. Проектировать и программировать встраиваемые системы и интерфейсы оборудования с использованием языков программирования.

В процессе аттестации по учебной дисциплине осуществляется комплексная проверка умений и знаний, а в ходе текущего контроля, также динамика формирования общих компетенций.

Промежуточная аттестация по учебной дисциплине проводится в формах, предусмотренных учебным планом основной профессиональной образовательной программы специальности.

2 ОЦЕНКА ОСВОЕНИЯ УЧЕБНОЙ ДИСЦИПЛИНЫ

2.1 Формы и методы текущего контроля знаний и умений

В ходе текущего контроля знаний и умений по учебной дисциплине применяются следующие формы и методы контроля и оценки:

- оценка результатов аудирования;
- тестирование;
- оценка результатов выполнения практических заданий.

Задания, используемые для проведения текущего контроля, отражаются в методических разработках для лабораторных, практических или контрольных работ. Конкретный перечень мероприятий текущего контроля отражается в календарно-тематическом плане учебной дисциплины.

2.2 Формы промежуточной аттестации

Предметом оценки освоения учебной дисциплины являются умения и знания.

Промежуточная аттестация по учебной дисциплине осуществляется в следующих формах:

Таблица 1- Запланированные формы промежуточной аттестации

№ семестра	Формы промежуточной аттестации
4,6	<i>Дифференцированный зачет</i>

2.3 Контрольно-оценочные материалы для промежуточной аттестации по учебной дисциплине

В 4,6 учебном семестре, для подготовки к промежуточной аттестации по учебной дисциплине, студенту в срок не позднее, чем за 4 недели до начала промежуточной аттестации выдаются контрольно-оценочные материалы (ф.УР-33). Для проведения промежуточной аттестации по учебной дисциплине в форме экзамена в срок не позднее, чем за 6 недель до его начала составляются экзаменационные билеты (ф.УР-34, ф.УР-35)/ вопросы и практические задания для проведения промежуточной аттестации в форме теста (ф.УР-36).

Материалы для проведения текущего контроля знаний и умений по дисциплине

Входной контроль

Выберите один из предложенных вариантов ответа :

The quiz

1. When is the Halloween?
 - a) The 31st of October
 - b) The 31st of December
 - c) The 15th of November
2. What is the time-of-no-time ?
 - a) The trademark of a wristwatch
 - b) Two days after the Halloween
 - c) Having no free time
3. Cumbria is :
 - a) A city in the Great Britain
 - b) A part of England
 - c) An island
4. Nowadays the Tower is:
 - a) A prison
 - b) A palace
 - c) A museum
5. What is the Beatles' native town ?
 - a) London
 - b) Manchester
 - c) Liverpool
6. Who are Beefeaters?
 - a) Drunkards
 - b) The royal guards
 - c) The clowns
7. What is York Minster ?
 - a) A city
 - b) The name of the cathedral
 - c) A university

Грамматика

Проверочная работа по грамматике по теме «Времена английского глагола»

1. Прочитать и написать текст используя прошедшее время:

On Monday we have five lessons. The first lesson is Russian. At this lesson we write a dictation and do some exercises. Nick goes to the blackboard. He answers well and gets a “five”. Pete does not get a “five” because he does not know his lesson. After the second lesson I go to the canteen. I eat a sandwich and drink a cup of tea. I do not drink a milk. After school I do not go home at once. I go to the library and take a book. Then I go home.

Подсказки: **the canteen** – школьная столовая

Do not (does not) – вспомогательные глаголы для образования отрицания в настоящем времени

Для образования отрицания в прошедшем времени используется глагол **did** с частицей **not** - **did not**.

2. Написать текст, используя глагол в нужном времени (Present Simple или Future Simple)

1. If you (to translate) this article into Russian, I shall use it in my report.
2. If she (to be) in St. Petersburg now, she will meet you at the railway station.
3. If you (not to hurry), you will miss the train.
4. If it (to rain) we shan't go to the country.
5. When my friend (to come) to St. Petersburg, we shall go to the Russian Museum.
6. What will you be doing when he (to come) to your place ?
7. Don't forget to pay for your dinner before you (to leave) the canteen.
8. I shall be able to translate this article if you (to give) me a dictionary.
9. You will have to work hard at home if you (to miss) the lesson.
10. Where will you go when you (to come) to London ?

3. Написать текст, используя глагол в Present Perfect или Past Simple:

1. He (to be) abroad five years ago.
2. They (to leave) England when he (to be) still a child.
3. He (not yet to come) back.
4. He (to go) already?
5. When you (to see) him last?

6. I (not to see) him for ages.
7. His health (to improve) greatly since I (to see) him last.
8. Where you (to spend) your holidays?
9. You ever (to spend) your holidays in the Crimea ?
10. I never (to visit) that place.
11. He (to visit) that place last year ?
12. I just (to get) a letter from Tom.
13. I (not to read) the newspaper today.
14. We (to go) to the country yesterday.
15. She just (to go) out.

**Проверочная работа по грамматике по теме
«Залоги английского глагола»**

Перепишите текст, употребляя глаголы в скобках в действительном или страдательном залоге:

1. Nobody (to see) him yesterday.
2. The money (to receive) tomorrow.
3. He (to give) me this book next week.
4. The answer to this question can (to find) in the encyclopedia.
5. We (to show) the historical monuments of the capital to the delegation tomorrow.
6. You can (to find) interesting information about the life in the USA in this book.
7. Budapest (to divide) by the Danube into two parts: Buda and Pest.
8. Yuri Dolgoruky (to found) Moscow in 1147.
9. Moscow University (to found) by Lomonosov.
10. We (to call) Zhukovsky the father of Russian aviation.
11. He (to speak) very highly of the doctor.

Проверочная работа по грамматике для студентов 1 курса по теме

**Проверочная работа по грамматике по теме
«Модальные глаголы»**

Часть 1. Перепишите предложения на английском языке, употребляя выражение to be able to:

1. Ты сможешь сделать эту работу завтра?
2. Я думаю, она не сумеет решить эту задачу.
3. Вчера я не смог повидать директора, так как он был занят.

Часть 2. Перепишите предложения на английском языке, употребляя модальный глагол may:

1. Если твоя работа готова, можешь идти домой.
2. Учитель сказал, что мы можем идти домой. (см. подсказки)
3. Доктор говорит, что я уже могу купаться.
4. Я думал, что мне можно смотреть телевизор. (см. подсказки)
5. Если ты не наденешь пальто, ты можешь заболеть.

Часть 3. Перепишите предложения на английском языке, употребляя выражение to be allowed to:

1. Вчера ей позволили прийти в десять часов.
2. Нам не позволяют разговаривать на уроках.
3. Тебе позволили взять эту книгу?
4. Я думаю, мне не разрешат поехать с тобой за город.
5. Когда мне разрешат есть мороженое?

Часть 4. Перепишите предложения в том времени, которое указано в скобках, заменяя must и can эквивалентами:

1. You must take your examination in English (будущее)
2. We can't meet them at the station (будущее)
3. The doctor must examine the child (прошедшее)
4. She can translate this article without the dictionary (прошедшее)
5. I can't recite this poem (прошедшее)

Часть 5. Перепишите предложения, вставьте модальные глаголы to have to или to be to .

1. She ... to send a telegram because it was too late to send a letter.
2. They decided that she ... to send them a telegram every tenth day.
3. You ... to learn all the new words for the next lesson.
4. It is raining. You ... to put on your raincoat.
5. I told her she ... to open the window for a while every day.

Подсказки :

1. Might употребляется (вместо may) в косвенной речи, зависящей от глагола в прошедшем времени (согласно правилу согласования времен).
2. Заболеть – get ill, уезжать за город – to go out of town

3. Вопросы с конструкциями to be able и to be allowed to образуются путём перестановки глагола to be (в нужном лице и числе) перед подлежащим.

**Проверочная работа по грамматике по теме
«Согласование времён»**

Перепишите предложения , выбирая нужную форму глагола в скобках

1. He said he (is staying, was staying) at the “Ritz” Hotel.
2. They realized that they (lost, had lost) their way in the dark.
3. He asked me where I (study, studied).
4. I thought that I (shall finish, should finish) my work at that time.
5. He says he (works, worked) at school two years ago.
6. Victor said he (is, was) very busy.
7. My friend asked me who (is playing, was playing) the piano in the sitting-room.
8. He said he (will come, would come) to the station to see me off.
9. I was sure he (posted, had posted) the letter.
10. I think the weather (will be, would be) fine next week. I hope it (will not change, would not change) for the worse.
11. I knew that he (is, was) a very clever man.
12. I want to know what he (has bought, had bought) for her birthday.
13. I asked my sister to tell me what she (has seen, had seen) at the museum.

Перепишите предложения , выбирая нужную форму глагола в скобках

1. He said he (is staying, was staying) at the “Ritz” Hotel.
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11. I knew that he (is, was) a very clever man.
12. I want to know what he (has bought, had bought) for her birthday.
13. I asked my sister to tell me what she (has seen, had seen) at the museum.

**Проверочная работа по грамматике по теме
«Типы условных предложений»**

Перепишите предложения , употребляя глаголы в скобках в требующейся форме.

1. If you (not to buy) coffee we will drink tea.
2. If my friend (to work) in my office we will meet every day.
3. If you (to ring) me up I will tell you a secret.
4. If you (to be) a poet you would write beautiful poetry.
5. If he did not read so much he (not to know) English literature so well.
6. If you gave me your dictionary for a couple of days I (to translate) the text.
7. If he had warned me I (to do) the work in time.
8. If you had not put the cup on the edge of the table it (not to get) broken.
9. If you (to go) to the theater with us last week you would have enjoyed the evening.
10. You would not feel so bad if you (not to smoke) too much.

**Проверочная работа по грамматике по теме
«Сдвиг времён»**

Часть 1. Перепишите следующие повелительные предложения на английском языке в косвенной речи :

1. The teacher said to me, “ Hand this note to your parents, please”.
2. I said to Mike, “ Send me a telegram as soon as you arrive”.
3. Father said to me , “Don’t stay there long”.
4. Jane said to us, “Please tell me all you know about it.”
5. Peter said to them, “Don’t leave the room until I come back”.

Часть 2. Перепишите следующие вопросительные предложения на английском языке в косвенной речи :

1. Kate said, “Mike, do you like my dress?”
2. My sister said to me, “Will you take me to the theater with you tomorrow?”
3. The teacher said to Mike, “Does your father work at the factory?”
4. Father said to Nick, “Have you done your homework?”
5. Mother asked me, “Did you play with your friends yesterday?”
6. I said to Nick, “Where are you going?”
7. He said to her, “Where do you usually spend your summer holidays?”
8. She said to Boris, “When will you be back home?”
9. I said to Becky, “What kind of books has your friend brought you?”
10. She asked me, “Why didn’t you come here yesterday?”

Часть 3. Перепишите следующие повествовательные предложения на английском языке в косвенной речи:

1. The boy said to his mother, “I have no time for lunch today”.
2. She said, “I spent my holidays in the Crimea last year.”
3. Ann said to us, “They haven’t come yet.”
4. She said to us, “They arrived in Saint Petersburg yesterday.”
5. The teacher said to the pupils, “Next year we will have six hours of English a week.”

Критерий оценивания (по каждому заданию) : все задания выполнены правильно – «отлично» ;

2-3 ошибки – «хорошо»

Более 3 ошибок – «удовлетворительно»

Более 6 ошибок – «неудовлетворительно»

Лексика

ПРАКТИЧЕСКИЕ ЗАДАНИЯ ДЛЯ СТУДЕНТОВ , ОБУЧАЮЩИХСЯ ПО СПЕЦИАЛЬНОСТИ «РЕМОНТ И ОБСЛУЖИВАНИЕ РАДИОТЕХНИКИ»
Переведите тексты и сделайте пересказ (на английском языке)

Resistors

A resistor is a two-terminal electric circuit component that offers opposition to an electric current. The greater the resistance, the lower the current will be. Resistors have two points of contact to which the resistor can be connected to an electrical circuit. Resistance is a characteristic of Resistor.

An ohm is the amount of resistance which passes one ampere of current when a one volt potential is placed across it. (The ohm is actually defined as the resistance which dissipates one watt of power when one ampere of current is passed through it.)

Resistance can vary from very small to very large.

Resistors which dissipate large amounts of power are cooled so that they are not destroyed, typically with finned heat sinks keeping the component from melting or setting something on fire. Every material has its own resistivity. Most metals are conductors and have very low resistivity ; whereas, insulators such as rubber, wood and air all have very high resistivity. Silver, copper, gold and aluminum are popular materials for wires due to low resistivity. Silicon and germanium are used as semiconductors. Glass, rubber, quartz crystal and air are popular dielectrics due to high resistivity.

The resistivity of a material also depends on its temperature. Normally, the hotter an object is, the more resistance it has. At high temperatures the resistance is proportional to the absolute temperature. What counts as low temperature depends on what the resistor is made from. In some materials the resistivity drops to zero below a certain temperature. This is known as **superconductivity** and has many useful applications.

For all resistors the change in resistance for a small increase in temperature is directly proportional to the change in temperature.

Resistors in series are equivalent to having one long resistor. If the properties of two resistors are equivalent, except the length, the final resistance will be the sum of the two construction methods.

Christmas tree lights are usually connected in series with the unfortunate effect that if one light blows the others will all go out. (This happens because the circuit is not complete, if a circuit is not complete then the current cannot flow, the light bulbs all go out).

In a parallel circuit current is divided among multiple paths. This means that two resistors in parallel have a lower equivalent resistance

than either of the parallel resistors since both resistors allow current to pass.

The resistor has a rating (in watts). One watt is equivalent to the power represented by one ampere of current under a pressure of one volt.

There are basically two resistor types regarding mode of operation : fixed and variable. A fixed resistor has a fixed value and a variable resistor can be varied or adjusted to different resistance values. (A **rheostat** is a variable resistor with two terminals, one fixed and one sliding. It is often used with high currents).

Найдите эквиваленты: величина сопротивления ; ребристый радиатор; удельное сопротивление; что важно (так это то) ; мощность ; резисторы, соединенные последовательно (параллельно) ; скользящий;

Capacitors

A capacitor (known as condenser) is a passive electronic component consisting of a pair of conductors (in general of two metallic plates) separated by an insulator (dielectric). When there is a potential difference (voltage) across the conductors, a static electric field develops in the insulator that stores energy and produces a mechanical force between the conductors. An ideal capacitor is characterized by a single constant value, measured in farads.

Capacitors are widely used in electronic circuits for blocking direct current while allowing alternating current to pass.

Capacitors are also classified as fixed, adjustable, or variable. The capacitance of fixed capacitors remains unchanged, except for small variations caused by temperature fluctuations. The capacitance of adjustable capacitors may be set at any one of several values. The capacitance of variable capacitors may be adjusted continuously and set at any value. They include capacitors that use a mechanical construction to change the distance between the plates, or the amount of plate surface area which overlaps, and variable capacitance diodes that change their capacitance as a function of the applied reverse bias voltage.

Variable capacitance is also used in sensors for physical quantities, including microphones, pressure and hydro sensors.

Most types of capacitor include a dielectric spacer, which increases their capacitance. However, low capacitance devices are available with a vacuum between their plates, which allows extremely high voltage operation and low losses. Air filled variable capacitors are also commonly used in radio tuning circuits.

Several solid dielectrics are available, including paper, plastic, glass, mica and ceramic materials. These materials can be found in fixed capacitors. Paper was used in older devices and offers relatively high voltage performance.

However, it is susceptible to water absorption. Plastics offer better stability and performance, although they may be limited to low operating temperatures and frequencies. Ceramic capacitors are generally small, cheap and useful for high frequency application, although their capacitance varies strongly with voltage and they age poorly. Glass and mica capacitors are extremely reliable, stable and tolerant to high temperatures and voltages, but are too expensive for most applications.

Fixed electrolytic capacitors use an aluminum or tantalum plate with an oxide dielectric layer.

Electrolytic capacitors offer very high capacitance but suffer from poor tolerances, high instability, loss of capacitance especially when subjected to heat, and high leakage current. The conductivity of the electrolyte drops at low temperatures, which increases equivalent series resistance. Tantalum capacitors offer better frequency and temperature characteristics than aluminum, but higher dielectric absorption and leakage.

Найдите эквиваленты : конденсатор; изолятор; постоянная величина ; конденсатор постоянной емкости ; конденсатор переменной емкости; переменный конденсатор; колебания; пластины, хранящие заряды ; частично покрывает ; обратное напряжение; диэлектрическая прокладка ; слюда; восприимчивый ; тантал; окисленный слой диэлектрика; ток утечки;

Критерий оценивания : содержание текста передано без искажений – «отлично» ;

Наличие небольшого количества ошибок, не искажающих смысла текста, подразумевают оценку «хорошо»

Содержание текста передано с искажениями, затрудняющими понимание, означают оценку «удовлетворительно»

ПРАКТИЧЕСКИЕ ЗАДАНИЯ ДЛЯ СТУДЕНТОВ , ОБУЧАЮЩИХСЯ ПО СПЕЦИАЛЬНОСТИ «ПРОГРАММНОЕ ОБЕСПЕЧЕНИЕ»

Переведите тексты и сделайте пересказ (на английском языке)

A brief history of Java (part 1)

At first glance, it may appear that Java was developed specifically for the world wide web. However, interestingly enough, Java was developed independently of the web and went through several stages of metamorphosis before reaching its current status of de facto programming language for the world wide web. Below is a brief history of Java since its infancy to its current state.

According the Java FAQ, Bill Joy, currently a vice president at Sun Microsystems, is widely believed to have been the person to conceive of the idea of a programming language that later became Java. In late 1970's Joy wanted to design a language that combined the best features of MESA and C. In an attempt to rewrite the UNIX operating system in 1980's Joy decided that C++ was inadequate for the job. A better tool was needed to write short and effective programs. It was this desire to invent a better programming tool that swayed Joy, in 1991, in the direction of Sun's "Stealth Project" – as named by Scott McNealy, Sun's president.

In January of 1991, Bill Joy, James Gosling, Mike Sheradin, Patrick Naughton (formerly the project leader of Sun's Open Windows user environment), and several other individuals met in Aspen, Colorado, for the first time to discuss the ideas for the Stealth Project. The goal of the Stealth Project was to do research in the area of application of computers in the consumer electronics market. The vision of the project was to develop "smart" consumer electronic devices that could all be centrally controlled and programmed from a handled-remote-control-like device. According to Gosling, "the goal was ... to build a system that would let us do a large, distributed, heterogeneous network of consumer electronic devices all talking to each other." With this goal in mind, the stealth group began work.

Members of the Stealth Project, which later became known as the Green Project, divided the tasks amongst themselves. Mike Sheradin was to focus on business development, Patrick Naughton was to begin work on the graphics system and James Gosling was to identify the proper programming language for the project. Gosling who had joined Sun in 1984, had previously developed the commercially unsuccessful NeWS windowing system as well as GOSMACS – a C language implementation of GNUEMACS. He began with C++, but soon after was convinced that C++ was inadequate for this particular project. His extensions and modifications to C++ (also known as C++ ++), were the first steps towards the development of an independent language that would fit the project objectives. He named the language "Oak" while staring at an oak tree outside his office window ! The name "Oak" was later dismissed due to a

patent search which determined that the name was copyrighted and used for another programming language. According to Gosling, “the Java development team discovered that Oak was the name of a programming language that predated Sun’s language, so another name had to be chosen”.

“It’s surprisingly difficult to find a good name for a programming language, as the team discovered after many hours of brainstorming. Finally, inspiration struck one day during a trip to the local coffee shop” Gosling recalls. Others have speculated that the name Java came from several individuals involved in the project: James Gosling, Arthur Van Hoff, Andy Bechtolsheim.

A brief history of Java (part 2)

There were several criteria that Oak had to meet in order to satisfy the project objective given the consumer electronics target market. Given the wide array of manufacturers in the market, Oak would have to be completely platform independent, and function seamlessly regardless of the type of CPU in the device. For this reason, Oak was designed to be an interpreted language, since it would be practically impossible for a compiled version to run on all available platforms. To facilitate the job of the interpreter, Oak was to be converted to an intermediate “bytecode” format which is then passed around across the network, and executed /interpreted dynamically.

Additionally, reliability was of great concern. A consumer electronics device that would have to be “rebooted” periodically was not acceptable. Another important design objective for Oak would then have to be high reliability by allowing the least amount of programmer-introduced errors. This was the motivation for several important modifications to C++. The concepts of multiple-inheritance and operator overloading were identified as sources of potential errors and eliminated in Oak. Furthermore, in contrast to C++, Oak included implicit garbage collection thereby providing efficient memory utilization and higher reliability. Finally, Oak attempted to eliminate all unsafe constructors used in C and C++ by only providing data structures within objects.

Another essential design criterion was security. By design, Oak-based devices were to function in a network and often exchange code and information. Inherently, security is of great concern in a networked environment, especially in an environment as network dependent as the conceived Oak-based systems. For this reason, pointers were excluded in the design of Oak. This would theoretically eliminate the possibility of malicious programs accessing arbitrary addresses in memory.

If Oak were to be widely accepted and used within the consumer electronics industry, it would have to be simple and compact, so that the language could be mastered relatively easily and development would not be excessively complex. Some would argue that Oak/ Java is C++ done right, but the jury is still out on that...

In April of 1991, Ed Frank, a SPARCstation 10 architect, joined the green project. He led the project's hardware development effort. In two months they developed the first hardware prototype known as star-seven (*7). The name *7 was somewhat demonstrative of the project's objective. *7 was the key combination to press on any telephone to answer any other ringing telephone on their network. In the meantime, Gosling was beginning work on the Oak interpreter. By August of 1991, the team had a working prototype of the user interface and graphical system which was demonstrated to Sun's co-founders Scott McNealy and Bill Joy.

Development of Oak, the green OS, the user interface, and the hardware continued through the summer of 1992. In September of that year, the *7 prototype was complete and demonstrated to McNealy and Joy. The prototype was a PDA (personal digital assistant) device that Gosling described as a "handheld remote control". Patrick Naughton proclaimed that "in 18 months we did equivalent of what 75-people organizations at Sun took three years to do – an operating system, a language, a toolkit, an interface, a new hardware platform...".

While impressive, the market was not conducive to this type of technology, as later demonstrated by Apple's Newton PDA. The Green project's business planner, Mike Sheradin, and hardware designer, Ed Frank, had envisioned a technology similar to that of Dolby Labs which would become the standard for the consumer electronics products.

In November of 1992, the Green Project is incorporated under the name FirstPerson. Given Java's lack of success in the consumer electronics industry, the company's direction was somewhat uncertain. Under Sun's influence, the company began re-evaluating its mission.

In early 1993, Time-Warner issued an RFP (request for proposal) for a set-top box operating system and interactive, video-on-demand technology. FirstPerson identified this area as a new target market, and began working in that direction. However, despite FirstPerson's great efforts, SGI was granted the contract by Time-Warner. By mid 1993 Sun began negotiating with 3DO to provide a Java-based OS for their set-top box. The negotiations were, however, unsuccessful and a deal was never made. FirstPerson was left on its own without any viable business prospects. Another attempt by the company to market its interactive TV technology fails when in February of 1994 a public launching of their products is canceled.

A Sun higher level review of FirstPerson determines the interactive TV market to be immature in 1994. FirstPerson then shifts its focus yet again. Business plans are submitted to Sun's executives for developing Oak-based on-line and CD-ROM applications. Sun's response was not favorable and FirstPerson was dissolved. Most of FirstPerson's employees moved to Sun Interactive to digital video data servers. However, a few individuals from FirstPerson still pursued the objective of finding a home for Java in a networked desktop market.

In June of 1994, Bill Joy started the “Liveoak” project with the stated objective of building a “big small operating” system. In July of 1994 the project “clicked” into place. Naughton gets the idea of putting “Liveoak” to work on the Internet while he was playing with writing a web browser over a long weekend. Just the kind of thing you’d want to do with your weekend! This was the turning point for Java.

The World Wide Web, by nature, had requirements such as reliability, security and architecture independence which were fully compatible with Java’s design parameters. A perfect match had been found. By September of 1994 Naughton and Jonathan Payne (a Sun engineer) start writing “WebRunner”, a Java-based web browser which was later renamed ‘HotJava’. By October 1994, HotJava is stable and demonstrated to Sun executives. This time Java’s potential in the context of the World Wide Web is recognized and the project is supported. Although designed with a different objective in mind, Java found a perfect match in the World Wide Web. Many of Java’s original design criteria such as platform independence, security and reliability were directly applicable to the World Wide Web as well. Introduction of Java marked a new era in the history of the web. Information providers were now given the capability to not only deliver raw data, but also the applications that would operate on the data.

Sun formally announced Java and HotJava at “SunWorld 95”. Soon after, Netscape Inc. announced that it would incorporate Java support in their browser. This was a great triumph for Java since it was now supported by the most popular browser in the world. Later, Microsoft also announced that they would support Java in their Internet Explorer web browser, further solidifying Java’s role in the World Wide Web.

Set-top box operating system – операционная система, выпускаемая как отдельный продукт на собственном носителе ; ТВ-приставка.

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