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## **ОБУЧЕНИЕ АННОТИРОВАНИЮ И РЕФЕРИРОВАНИЮ АНГЛОЯЗЫЧНЫХ ТЕКСТОВ**

Методические указания  
для студентов и аспирантов

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**ХАНТЫ-МАНСИЙСКИЙ АВТОНОМНЫЙ ОКРУГ ТЮМЕНСКОЙ ОБЛАСТИ**  
**ДЕПАРТАМЕНТ ОБРАЗОВАНИЯ И НАУКИ ХМАО**  
**СУРГУТСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ ХМАО**  
**Кафедра иностранных языков**

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2003

Обучение аннотированию и реферированию англоязычных текстов: Метод. указания для студентов и аспирантов / Сост. О.В. Шальшкина; Сургут. гос. ун-т. – Сургут: Изд-во СурГУ, 2003. – 36 с.

Настоящее издание представляет собой методические указания для студентов неязыковых факультетов вузов и аспирантов. Целью данных указаний является формирование и совершенствование навыков аннотирования и реферирования.

В издании представлен теоретический материал, практические советы и рекомендации студентам и аспирантам по овладению данными видами письменной деятельности, тренировочные упражнения, а также дополнительные тексты для аннотирования и реферирования. При отборе текстов особое внимание уделялось их характеру и уровню сложности. В результате методические указания содержат тексты страноведческой, научно-популярной направленности среднего уровня сложности и могут быть рекомендованы студентам неязыковых факультетов дневного и заочного отделений вузов и аспирантам.

Печатается по решению редакционно-издательского совета Сургутского государственного университета.

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## РЕФЕРИРОВАНИЕ

Для того чтобы успешно овладеть навыками аннотирования и реферирования, необходимо сначала разобраться и четко усвоить, в чем разница между этими понятиями. Как реферат, так и аннотация выполняют следующие сходные функции:

- дают возможность установить основное содержание письменного источника и устраняют необходимость чтения полного текста, если он представляет для читателя второстепенный интерес;
- облегчают поиск информации в информационных системах.

Для написания как аннотации, так и реферата используйте клишированные выражения (клише). Говоря о клише, мы имеем в виду стереотипные выражения, шаблонные фразы или речевые штампы, воспроизводимые в типичных речевых контекстах и ситуациях.

Данный раздел расскажет вам о том, что такое реферирование, для чего оно применяется, и покажет на примере научно-популярного текста, как правильно составить реферат на английском языке.

Реферирование – написание реферата – заключается в лаконичном изложении основных мыслей текста-источника, их систематизации, обобщении и оценке. Реферат подразумевает компрессируемое, конспективное изложение основных положений, в которое не включаются второстепенные факты и детали, примеры, исторические экскурсы, отступления и т. п. Однородные факты группируются в обобщения, цифровые данные систематизируются. Рефераты делятся на информативные, или рефераты-конспекты, которые достаточно полно излагают все основные положения, доказательства и выводы; и индикативные, или рефераты-резюме, которые перечисляют лишь основные положения и выводы по ним без изложения доказательств. Оба вида рефератов могут быть монографическими, составленными на основании одного источника; сводными, излагающими содержание нескольких источников, объединенных общей темой; обзорными, излагающими результат обзора многих источников по определенной тематике. Для успешного реферирования текстов на английском языке необходимо владеть следующими навыками и речевыми умениями:

- использовать клишированные выражения (клише речевой деятельности), вводящие различные части текста реферата;
- делать лексико-грамматическое перефразирование (например выписывать из текста определенные формы и конструкции, подвер-

гать их трансформации, сокращать отдельные предложения, заменять придаточные предложения оборотами и т. п.);

- применять принятую в данной науке терминологию.

Объем реферата определяется степенью важности реферируемого материала, хотя практически его средний объем не должен превышать 2000 печатных знаков. Если оригинальный текст свернут в реферате до 1/8 его объема при сохранении основных положений, то такой реферат может считаться удовлетворительным, нормальным по объему. В практике составления рефератов допускаются следующие объемы:

- статья до 5 печатных страниц сворачивается до 125–200 слов;
- статья до 25 печатных страниц – до 250 и более слов;
- для более крупных документов – до 1200 слов.

**Для успешного написания реферата на английском языке руководствуйтесь следующими указаниями:**

### I. Придерживайтесь следующей структуры:

1. Введение, в котором необходимо указать инициалы автора и фамилию; название статьи, текста или книги; дать выходные данные источника (номер журнала или газеты, месяц и год издания, место издания, том, страница).
2. Область или раздел знания, к которому относится реферируемый материал; структура источника, если статья является одной из нескольких в книге, сборнике, пособии и т. п.; указание на наличие иллюстраций, схем, таблиц и т. п., если таковые имеются.
3. Главная мысль, идея реферируемого материала.
4. Краткое содержание реферируемого источника (излагается в той последовательности, в которой приводится в оригинале) – этот пункт должен составлять 2/3 всего вашего реферата.
5. Выводы или резюме составителя реферата, область применения результатов работы, предназначение статьи.

### II. Используйте следующие клише:

#### 1. Introduction. Введение.

The article/ text/ issue/ essay is   Статья/текст озаглавлен...  
headlined/ entitled...

The headline/ title of the article is...	Название статьи...
The author of the article is... (a world famous/ popula/, well-known scientist/ doctor/ engineer..., unknown).	Автор статьи... (всемирно известный/, знаменитый/ популярный ученый/ врач/ инженер..., неизвестен).
It was written by...	Она (статья) написана... (кем).
The article comes up from/ was published/ issued in... (Internet/ newspaper/ magazine/ journal/ book/ textbook "...")	Статья опубликована в... (Интернете/ газете/ журнале/ книге/ учебнике "...")
The article is dated.../ was published/ issued in... (2002)/ on... (the 11 <sup>th</sup> of April, 2002/ 11.04.2002).	Статья датирована.../ опубликована.../ выпущена...
It is situated on page.../ under column...	Находится на странице.../ под рубрикой...

## 2. Field of Study. Structure. Illustrations.

### Раздел знаний. Структура. Иллюстрации.

The article lies in/ refers to the field of... (medicine, biology, engineering, computer science...)	Статья относится к области... (медицины, биологии, инженерии, компьютерной науки...)
It concerns/ describes/ investigates the points of... (physiology, biochemistry, computer programming, ecology...)	Она касается/ описывает/ изучает вопросы... (физиологии, биохимии, компьютерного программирования, экологии...)
This article is drawn/ taken from the book/ collection of.../ series of...	Статья взята из книги/ собрания/ сборника...
The article is supplied with a scheme/ a diagram/ a table/ a picture/ a photograph of...	Статья снабжена схемой/ диаграммой/ таблицей/ рисунком/ фотографией...
The results/relevant data are shown in the table/ are illustrated/ described by the scheme/ are diagrammed...	Результаты/ важная информация представлены в таблице/ отражены/ описаны схемой/ диаграммой...

## 3. The Main Idea. Основная мысль.

The main idea/ key-note/ central topic of the article is...	Главная идея/ основная мысль/ статьи/ основная тема статьи...
The article touches upon/ highlights the question(s) of.../ a burning issue of today/ the problems of...	Статья затрагивает/ выделяет вопрос(ы) о.../ животрепещущую тему дня/ проблемы...
The article deals with a topical issue of today/ a question of paramount importance/ a burning problem/ debatable questions, points/ one of the controversial, eternal questions...	Статья рассматривает актуальную тему дня/ вопрос первостепенной важности/ животрепещущую проблему/ спорные вопросы, моменты/ один из спорных, вечных вопросов...
The author addresses himself to/ lays stress on the problem/ matters/ solution of...	Автор обращается/ акцентирует внимание на проблеме/ вопросах/ решении...

## 4. Rendering an Article. Содержание.

The article opens in a description/ an explanation a discussion of.../ a general statement...	Статья начинается с описания/ объяснения/ обсуждения/ утверждения общего характера...
At the beginning of the article the author states, that.../ informs us about.../ says that.../ focuses on.../ brings to the forefront the problem of...	В начале статьи автор утверждает, что.../ сообщает нам о.../ говорит, что.../ обращает внимание на.../ выносит на передний план проблему...
Further on, the article...	Далее статья...
After that, the author...	Затем автор...
In conclusion the author...	В заключение автор...
The author draws a conclusion saying that...	Автор делает вывод, говоря что ...
The article ends in...	Статья заканчивается...
Summing it up, the author...	Подводя итог, автор...
In the closing paragraph the author...	В заключительном абзаце автор...

### 5. Personal Attitude and Conclusions. Оценка автора и выводы.

I find the article interesting, informative, attention-catching, gripping, topical...	Я считаю статью интересной, содержательной, увлекательной, захватывающей, актуальной...
overlong, too wordy, boring, uninteresting...	слишком длинной, многословной, скучной, неинтересной...
The author..., and I can't agree more.	Автор..., и я более чем согласен.
The author is absolutely right saying that...	Автор совершенно прав, говоря что...
Unfortunately, the author has no solution to offer. He only...	К сожалению, автор не предлагает какого-либо решения. Он лишь...
The author, to my mind, misrepresents the situation/ the facts.	Я думаю, автор искажает ситуацию/ факты.
The author fails to persuade me that...	Автору не удастся убедить меня в том, что...
I don't agree with the author.	Я не согласен с автором.
The article is aimed to acquaint the readers with...	Основная задача статьи – ознакомить читателя с...
The article is intended for a wide range of readers/ for students of... faculty/ for people interested in...	Статья предназначена для широкого круга читателей/ для студентов ... факультета/ для людей, интересующихся...

### III. Используйте следующие глаголы:

disclose – разоблачать, раскрывать;	stress – подчеркивать;
emphasize – придавать особое значение, подчеркивать, акцентировать;	imply – подразумевать, предполагать;
forecast – предсказывать, предвидеть;	predict – предсказывать, пророчить;
	reveal – показывать, обнаруживать;

infer – означать, подразумевать;	advise – советовать;
insinuate – внушать исподволь, намекать;	persuade – убеждать;
reiterate – повторять;	explain – объяснять;
suppose – предполагать;	mention – упоминать;
admit – допускать, соглашаться;	warn – предупреждать, предостерегать;
believe – думать, полагать;	suggest – предлагать, советовать.

### IV. Прочитайте следующий текст и постарайтесь понять его содержание.

#### Black Cats and Broken Mirrors

(Newspaper "English", volume 23, March, 2002, p. 7)

1. Do you think that it is bad luck to walk under a ladder or break a mirror? Do you think that black cats and the number 13 are unlucky? Some people do, and some don't. The three men in America don't either. Every Friday the 13<sup>th</sup> they walk under ladders, break mirrors, and open umbrellas indoors. They want to prove that they aren't superstitious. They are rare people who aren't. There are over one million superstitions, and most people believe at least one or two of them.

2. Many people are superstitious about numbers. They think that there are lucky numbers and unlucky numbers. The number 13 is often considered unlucky. In some parts of the world, buildings have no 13<sup>th</sup> floor and streets have no houses with the number 13. In Japan, four is considered unlucky because in Japanese the word "four" is pronounced the same as the word "death". Japanese never give gifts of four knives, four napkins, or four of anything. What are the lucky numbers? Seven is a lucky number in many places, and eight is considered lucky in Japan and China. In China, businesses often open on August 8 (8-8), and many couples register to get married at eight past eight on August 8.

3. Superstitions about numbers are so widespread that some people – called numerologists – make a living giving advice about numbers. In 1937, when the Toyoda family of Japan wanted to form a car company, they asked a numerologist if "Toyoda" would be a good name for the company. The numerologist said it would not be. He explained that "Toyoda" took ten strokes of the pen to write, and 10 was not a lucky number. "Toyota", however, took eight strokes to write, and

eight was a very lucky number. The numerologist recommended "Toyota" as a better name for the company. The family took advice. As a result, millions of people drive "Toyotas" and not "Toyodas" nowadays.

4. In addition to superstitions about numbers, there are many other kinds of superstitions. There are superstitions about eating, sleeping, sneezing, and itching. There are superstitions about animals and holidays and horseshoes. There are even superstitions about superstitions. Those superstitions tell people how to reverse bad luck.

5. For example, in many parts of the world spilling salt is bad luck. Throwing salt, however, is good luck. So, people who spill salt throw a little of the spilled salt over their left shoulder. Throwing the spilled salt reverses the bad luck. When the Japanese bump heads, they immediately bump heads again. According to Japanese superstition, the first bump means their parents will die, but the second bump "erases" the first one. To reverse bad luck in general, people turn around three times, turn pockets inside out, or put their hats backwards. In the United States, baseball players sometimes wear their caps backwards when their team is losing. It looks silly, but the baseball players don't mind if it helps them win the game.

6. Because there are so many superstitions, it is not surprising that some of them are contradictory. In Germany, it is good luck when the left eye twitches and bad luck when the right eye twitches. In Malaysia, it is exactly the opposite: a twitching right eye means good luck, and a twitching left eye means bad luck. Accidentally putting on clothes inside out brings good luck in Pakistan but bad luck in Costa Rica. In Chile, unmarried people won't take the last piece of food on the plate because it means they will never marry. In Thailand, unmarried people do take the last piece because it means they will marry someone good-looking.

7. Some superstitions have been with us for so long that they have become customs. In many parts of the world it is polite to say "Health" or "God bless you" when someone sneezes. People used to think that the soul would escape from the body during a sneeze. They said, "God bless you" to protect people from losing their souls. Today we no longer believe that people who sneeze are in danger of losing their souls, but we say "God bless you" anyway. We say it not because we are superstitious, but because we are polite.

8. Even people who say they aren't superstitious would probably not intentionally walk under ladders and break mirrors. Almost everyone

is at least a little superstitious. One woman says that when she got married, her aunt gave her white bath towels. "Never buy purple towels," her aunt said. "If you use purple towels, your marriage will end." Does the woman believe that superstition? "No, of course not," she says. "It's silly." Does she use purple towels? "Well, no," she answers. "Why take chances?"

**V. Просмотрите план и дополните его в соответствии с содержанием текста (в плане пропущены два пункта):**

Plan

1. Superstitious people.
2. Numerologists and the "Toyota" company.
3. Other kinds of superstitions.
4. Contradictory superstitions.
5. Superstitions about sneezing.
6. Not to take chances.

**VI. Ответьте письменно на вопросы, используя клише. Ответы на эти вопросы станут основой для написания реферата любого источника.**

1. What is the headline of the article?
2. Whom was the article written by?
3. Where does the article come from? Was it published in a newspaper or a magazine?
4. When was it issued?
5. What page and column is the article placed?
6. What field of science does the article refer to?
7. Is it supplied with any illustrations?
8. What is the central topic of the issue?
9. What kind of questions does the author address himself to?
10. What is said at the beginning of the article (further on, in the closing paragraph)?
11. Do you find the article interesting or not?
12. Do you agree with the author?
13. What is the aim of the essay?
14. Whom is it intended for?

**VII. Закончите следующие предложения в соответствии с содержанием текста (письменно):**

1. The author emphasizes that...
2. Each paragraph reiterates that...
3. At the beginning of the article it is insinuated that...
4. Paragraph 3 explains why...
5. The fifth paragraph reiterates that...
6. This issue implies that...
7. In the seventh paragraph the author reveals...

**VIII. Найдите в тексте и выпишите доказательства следующих утверждений:**

1. All people are superstitious.
2. The number 13 is unlucky.
3. Eight is considered lucky in Japan and China.
4. The "Toyota" company got its name with the help of a superstition.
5. There are superstitions which tell people how to reverse bad luck.
6. Superstitions are contradictory.
7. Some superstitions became customs.

**IX. Выпишите основную мысль (информативное ядро) каждого абзаца, которые затем вы объедините в реферат.**

Кроме всего прочего, хотелось бы напомнить, что в английском языке все самостоятельные слова (то есть все слова, кроме предлогов и артиклей) в заголовках пишутся с заглавной буквы. Не забывайте и еще одно немаловажное правило: в английском языке и открывающие кавычки, и закрывающие ставятся сверху.

**X. Напишите реферат предложенной статьи, следуя примеру (см. приложение на стр. 27).**

### АННОТИРОВАНИЕ

Данный раздел расскажет вам о том, что такое аннотирование и как правильно написать аннотацию на английском языке.

Аннотация – краткое описание работы, дающее характеристику выходных данных, основной темы, проблемы, объекта, цели

работы и ее результатов. Аннотация включает сведения об авторе, направленности работы, ее ценности и назначении и имеет справочный характер. Рекомендуемый средний объем аннотации – 500 печатных знаков (обычно 7–8 предложений на английском языке). Хотя цель аннотирования совпадает в определенной степени с целью реферирования, однако между этими двумя формами обработки текста имеется существенное различие: если назначение реферата заключается в замене подлинника кратким и обобщенным его вариантом, достаточно полно отражающим его содержание, то аннотация лишь сообщает о наличии определенных сведений, материала из конкретной области знания. Кроме того, существенным различием этих двух видов письменной деятельности является тот факт, что в аннотации не дается личная оценка источника автором данной аннотации (что было обязательным пунктом при написании реферата – пункт 5).

Для того чтобы написать аннотацию на английском языке, по аналогии с написанием реферата, необходимо владеть теми же навыками и речевыми умениями и следовать определенной структуре аннотации.

**Для написания аннотации на английском языке руководствуйтесь следующими указаниями:**

#### **I. Придерживайтесь определенной структуры:**

1. Введение, в котором необходимо указать инициалы автора и фамилию; название статьи, текста или книги; дать выходные данные источника (номер журнала или газеты, месяц и год издания, место издания, том, страница).
2. Область или раздел знания, к которому относится реферируемый материал; структура источника, если статья является одной из нескольких в книге, сборнике, пособии и т. п.; указание на наличие иллюстраций, схем, таблиц и т. п., если таковые имеются.
3. Главная мысль, идея реферируемого материала (в этом пункте аннотации в двух-трех предложениях описывается основная мысль содержания письменного источника-оригинала).
4. Заключение (в этом пункте в зависимости от содержания и направленности источника мы пытаемся определить цель и предназначенность данной работы, то есть сообщаем, для какого круга читателей предназначен текст, на который мы пишем аннотацию).

## II. Используйте следующие клише (в соответствии со структурой аннотации):

### 1. Introduction. Введение.

The article/ text/ issue/ essay is headlined/ entitled...	Статья/текст озаглавлен...
The headline/ title of the article is...	Название статьи...
The author of the article is... (a world famous/ popular/ well-known scientist/ doctor/ engineer..., unknown).	Автор статьи... (всемирно известный/ знаменитый/ популярный ученый/ врач/ инженер..., неизвестен).
It was written by...	Она (статья) написана... (кем).
The article comes up from/ was published/ issued in... (Internet/ newspaper/ magazine/ journal/ book/ textbook "...")	Статья опубликована в... (Интернете/ газете/ журнале/ книге/ учебнике "...")
The article is dated.../ was published/ issued in... (2002)/ on... (the 11 <sup>th</sup> of April, 2002/11.04.2002).	Статья датирована.../ опубликована.../ выпущена...
It is situated on page.../ under column...	Статья находится на странице.../ под рубрикой...

### 2. Field of Study. Structure. Illustrations.

#### Раздел знаний. Структура. Иллюстрации.

The article lies in/ refers to the field of... (medicine/ biology/ engineering/ computer science...)	Статья относится к области... (медицины/ биологии/ инженерии/ компьютерной науки...)
It concerns/ describes/ investigates the points of... (physiology/ biochemistry/ computer program-ming/ ecology...)	Она касается/ описывает/ изучает вопросы... (физиологии/ биохимии/ компьютерного программирования/ экологии...)
This article is drawn/ taken from the book.../ collection .../ series of...	Статья взята из книги/ собрания/ сборника...
The article is supplied with a scheme /a diagram /a table / a picture /a photograph of...	Статья снабжена схемой/ диаграммой/ таблицей/ рисунком/ фотографией...

The results/relevant data are shown in the table/ are illustrated/ described by the scheme/ are diagrammed...  
Результаты/ важная информация представлены в таблице/ отражены/ описаны схемой/ диаграммой...

### 3. The Main Idea of an Article. Основная мысль.

The main idea/ key-note/ central topic of the article is...	Главная идея/ основная мысль/ статьи/ основная тема статьи...
The article touches upon/ highlights the question(s) of.../ a burning issue of today/ the problems of...	Статья затрагивает/ выделяет вопрос(ы) о.../ животрепещущую тему дня/ проблемы о...
The article deals with a topical issue of today/ a question of paramount importance/ a burning problem/ debatable questions, points/ one of the controversial/ eternal questions...	Статья рассматривает актуальную тему дня/ вопрос первостепенной важности/ животрепещущую проблему/ спорные вопросы, моменты/ один из спорных/ вечных вопросов...
The author addresses himself to/ lays stress on the problem/ matters/ solution of...	Автор обращается/ акцентирует внимание на проблеме/ вопросах/ решении...

### 4. Conclusion. Заключение.

Written by a well known (practicing) ... the article may be used by ...	Написанная хорошо известным (практикующим)... статья может быть использована... (кем).
The article is aimed to acquaint the readers with...	Основная задача статьи – ознакомить читателя с...
The article is intended for a wide range of readers/ for students of... faculty/ for people interested in...	Статья предназначена для широкого круга читателей/ для студентов ... факультета/ для людей, интересующихся...



III. Просмотрите нижеприведенную таблицу. Запомните, в чем заключаются основные различия между аннотацией и рефератом.

#### Основные различия аннотации и реферата

	Аннотация	Реферат
Особенности передачи содержания источника	Основная мысль только называется	Излагается основное содержание, ход рассуждения, аргументация
Объем	500 печатных знаков (7–8 предложений)	2000–2500 печатных знаков (15–20 предложений)
Личное мнение на содержание источника	Не высказывается	Высказывается

IV. Прочитайте следующую статью из газеты «Английский язык», приложения к газете «1 сентября», за март 2002 года, и постарайтесь понять ее содержание:

#### Industry: Music Piracy Jumps

(Newspaper “English”, March, 2002, p.1, column “News in Brief”)

1. The number of pirated music CDs grew by nearly 50 percent worldwide last year to a record 950 million unit. Pirated recordings, including CDs and cassettes, totaled nearly 2 billion in 2001, up just slightly from a year earlier, said the International Federation of the Phonographic Industry (IFPI).

2. While the United States music industry worries most about lost sales from individuals downloading songs from the Internet, there is a bigger threat globally from unauthorized copying of CDs and cassettes. These illegal CDs and cassettes now account for two out of every five units sold worldwide with piracy levels rising as high as 90 percent in countries like China.

3. Sales of pirated materials around the world amounted to \$4.3 billion, up from \$4.2 billion in 2000. The dollar value increase was marginal because of sharply falling prices for pirated CDs. Technology for recordable CDs, which are known as CD-Rs, has lowered the barriers to entry for pirates by making duplicating equipment cheaper and more

portable. CD-Rs accounted for nearly one-quarter of pirated sales last year, up from 9 percent the year earlier. Most pirates operate sophisticated, international networks that take advantage of lax copyright protection laws in countries such as Indonesia and Paraguay to manufacture and distribute their products, said Jay Berman, IFPI chairman and chief executive. As former hotbeds such as Bulgaria and Ukraine crack down, pirates simply pack up and move to countries like Russia that have scant protections for copyright holders.

4. Certain countries should regulate CD-manufacturing plants to limit abuses, said Neil Turkewitz, a vice president with the Recording Industry Association of America, a U.S. trade group.

By Thomas Sherwood

V. Ответьте письменно на вопросы на странице № 11 (кроме вопросов № 9–12).

VI. Выпишите из каждого абзаца по одному предложению, которое более точно описывает его основную мысль.

VII. Преобразуйте выписанные предложения в назывные и составьте из них план текста, например:  
*Growing number of pirated recordings.*

VIII. Сгруппируйте пункты своего плана в одно-два развернутых предложения, выполнив необходимые лексико-грамматические изменения (получившиеся в результате этого преобразования предложения будут являться пунктом 3 вашей аннотации).

IX. Прочитайте следующую аннотацию данной статьи на русском языке и определите, какие пункты в ней не освещены.

Статья была опубликована в газете «Английский язык». Автор статьи Томас Шервуд.

В статье представлены данные о возросшем количестве пиратских записей в Соединенных Штатах. Кроме того, автор затрагивает проблему отсутствия законов, регулирующих производство и нелегальную продажу компакт-дисков.

**Х. Дополните аннотацию на русском языке. Переведите полученную аннотацию на английский язык. Следуйте примеру (см. Приложение на стр. 32).**

## **ТЕКСТЫ ДЛЯ АННОТИРОВАНИЯ И РЕФЕРИРОВАНИЯ**

### **The Kremlin**

(Newspaper "English", 13/2002, p. 11)

Today when we look at the map of the Moscow metro it is difficult to imagine that several centuries ago the citizens of the capital could not imagine such a huge territory as the city occupies today. The main area was situated on a high hill, the actual place of the Kremlin. The first document that mentions Moscow dates back to the 12<sup>th</sup> century (1147). However we shouldn't forget that at that time the town was already very well developed and could provide all the necessities for the two princes' armies that came to Moscow for a feast. The celebration was luxurious and lasted several days. From these facts it is possible to conclude that the capital is older than it is usually believed to be.

The red walls of the Moscow Kremlin that all Russians are so proud of appeared only during the reign of Ivan III. What was the fortress like before? Not so majestic as it is today, of course: simple wooden walls that protected a small territory inside them. So why did the area of the Kremlin constantly grow? Little by little people were building houses around the fortress. Even despite the fact they were not surrounded by the walls, citizens felt more secure near the fortress than somewhere in the depths of the forest. Thus the possibility to fight together against enemies, plus economic reasons, pushed people to live close to the Kremlin.

Wooden walls were good to protect the population; but there was a very dangerous enemy – fire. During many centuries Muscovites lived in a constant fight against this element that offers life but at the same time can take it away in just a few minutes.

In 1336 a new prince – Dmitriy Donskoy – ordered a fortress built from white bricks. Its remains exist still today: if we look carefully at the base of the actual Kremlin we will see that it is not red but white. Since that time Moscow was nicknamed "white brick" and the name remained even to the 15<sup>th</sup> century when white walls were replaced by red ones.

Today there are 20 towers in the Kremlin and there is an interesting story connected with one of them – the Spasskaya (Savior) Tower. Once Moscow doctors had to face the same disease of many patients. It was a terrible headache, whose origins remained unclear until someone suddenly realized that all these problems appeared because of the Savior Tower! It was the entrance to the Kremlin and there was an icon over it.

The Kremlin has always been the heart of Moscow. At first its walls surrounded the whole town; today the capital is so big that it would be difficult to put its huge population in the area of the fortress. However the Kremlin still plays an important role not only in the life of Moscow but also in Russia's as well. It is the government seat and the location of numerous historical monuments.

Cathedral Square, formed by three cathedrals (Assumption Cathedral, Annunciation Cathedral and Archangel Cathedral), developed in the 15<sup>th</sup> century. It was the place of coronation festivities and religious processions.

In the 15<sup>th</sup> century Moscow became the major Russian town and it was necessary to replace the old, dilapidated Kremlin walls and to build new ones to receive foreign guests.

1472 was the year of the beginning of the Assumption Cathedral's erection. Before that there had been a cathedral built in the 14<sup>th</sup> century on the same site. The construction of the new building lasted two years and the Cathedral's walls were almost finished when suddenly the northern wall collapsed.

There were several versions of the catastrophe cause. According to one of them, an earthquake destroyed the Cathedral. The second one notes the fact of the bad state of the inside of the building and finally the third variant tells us about careless builders that prepared the lime poorly. However there was another serious reason. We shouldn't forget that during the Tatar Yoke, the Russian masters lost their skills. When Ivan III wanted some masters from Pskov to build the Cathedral, they refused, as the task was too difficult for them. That is why the prince fixed upon an Italian architect – Aristotle Fioravanti – who was noted for his buildings in Italy.

To destroy the walls of the ancient cathedral, the architect used methods unknown in Russia and the lime made by him was extremely solid.

In 1479 the construction of Assumption Cathedral was finished. At that time, when light was the symbol of truth, the cathedral was the lightest temple in the country. In the domes you can see icons of God, archangels, and forefathers; the columns are decorated with figures of Christian martyrs; the western wall by tradition represents the Last Judgment. (For those who leave the Cathedral, not to forget that it is waiting for everyone and for everybody to be righteous men.)

Earlier there were gold and silver objects, manuscripts and clothes for the divine services in the Cathedral. All of them are currently displayed in the Armory Museum.

However there is a work of art set out in Assumption Cathedral – Ivan the Terrible’s throne in the form of the marquee with scenes representing episodes from legends about the tsar’s ambassadors. The throne was used during coronations and divine services that took place in the Cathedral.

By Alevtina Kozina

### **The Aral Sea**

(Newspaper “English“, 20/2002, p. 7)

Since the beginning of its existing, the human being has been developing. It has never stopped, and it never will. During the last couple of centuries it has been developing very aggressively, and it has reached tremendous achievements in all fields. Unfortunately mankind has achieved tremendous success in polluting its environment also. Nowadays, nature is missing many of its inhabitants – those who are supposed to be under the protection of humans as young brothers and sisters. Pollution was the reason for their extinction. Finally, the humanity started paying more attention to what surrounds it. It started thinking about the future, its future generations, and the inheritance to these generations. People have started asking themselves more often questions like, “What will we have left to other children after us?” Currently, humanity has plenty of global environmental problems that it has to care of now. Tomorrow will be too late. Some of these global environmental are global warming, deforestation, freshwater contamination, destruction of ozone layer of the earth, pollution of space orbit of the earth by parts of used equipment. Desiccation of the Aral Sea is one of the items on the list.

The Aral Sea, which is also considered to be a lake or Inland Sea in Central Asia, is located in southwestern Kazakhstan and northwestern Uzbekistan, near the Caspian Sea. The Aral has no outlet. The Aral Sea is still listed as the fourth lake in the world. But it has been shrinking for decades, and the statistics might change.

Nowadays, two major problems have risen before the governments of Uzbekistan and Kazakhstan; the desiccation and as a result of this threat of the complete disappearance of the sea, and the danger of the broad extension of anthrax bacteria that was stored by the Soviet Army on Vozrozenia Island.

In comparison with the size of the sea in the 1960’s, the Sea has declined in size by 76 percent. The initial reason for the Aral’s decline is the fact that Soviet planners diverted water from Aral’s two big feeding rivers (Amu Darya and Syr Darya) into cotton fields in the territory of Uzbekistan. Because of this irrigation, the sea is now seventy miles away from its former bank (in some places even more). Ninety percent of the Syr Darya’s water is diverted into canals and reservoirs. Millions of people in Central Asia rely on the rivers for a livelihood. Uzbekistan, for instance, generates 28 percent of its hard currency from cotton irrigated with river water.

Planning the irrigation system, the Soviet planners were only after high rates of cotton harvests. Unwise use of water has led to the current state of the Aral Sea. The salt content of the Sea’s water increased by about threefold, adversely affecting plant and animal life and causing the fishing industry to decline.

The disappearance of the sea as a part of the ecosystem is just one problem that is followed by hundreds of subsequent problems. One of them has already risen: the drying of the sea has left behind three million hectares of desiccated seabed, covered with accumulated salts which the wind carries away and deposits over thousands of square kilometers of arable land turning it into dead one. One can see white ridges amid the soil in the field. Salty dust from the dried out land causes discomfort and respiratory problems. Wind brings more than a hundred tons of salty dust per square mile every year. As a result, trees do not bear fruit any more.

The Aral Sea’s desiccation has an influence on everything that is around it. The climate in the region has changed significantly; the winters are colder, summers are even hotter.

The sea was not only the water supply for the population, but it was the source of their income. A large part of the population was involved in fishing and resort industry. Now, the sea is far away, these businesses are not available any more, and that leads to deterioration of the financial situation in the area.

In city of Muynak, the three hundred-vessel fleet once employed a thousand fishers. It is now a collection of rusting hulls half-buried amid the dunes on the edge of the town. Yet the sixty-year old canning factory still clatters, although its seven hundred workers handle fish brought by lorry from the lakes around Tashkent, one thousand miles away.

The sea has turned from a rich fishing ground to a prairie of poisonous dust. Desiccation has a great influence on the population's health; the change in environment has significantly increased rates of birth defects, infant mortality, respiratory diseases, cancers, malnutrition, etc. Another side effect imposed on the population is a dramatically increased rate of tuberculosis in the area.

One of the causes of health deterioration is that the Aral Sea contains a lot of pesticides, which sank to the bottom of the sea. As the lake dried up, this layer of pesticide became exposed to the wind, which blows it away on the other lands.

The partial solution for the problem is to build a dam to keep water from flowing into the larger, southern portion. Plans call for the structure's base to be 150 yards wide. If money is found for the construction, the water level of the northern sea will rise to the same level it was in 1960's. It is a rare ray of hope for the population of this region. Calculations by the Kazak Academy of Science in Almaty suggest the entire sea will disappear by 2010 without the dam.

The second threat to the Aral Sea and its inhabitants is anthrax bacteria stored since 1988 by the Soviet Army on one of the islands of the sea. Now, the sea is drying out and this island can become a part of land. This fact carries the threat that anthrax bacteria can be exposed to atmosphere one day, and it will become a very serious danger to both countries. At this time both governments in cooperation with the USA are undertaking actions in order to prevent the possible catastrophe.

Over the last two centuries many of the Earth's inhabitants became extinct as a result of environmental pollution. It is time to stop it; otherwise the next extinct inhabitant might turn out to be humanity itself.

### Statue of Liberty Dedicated (Newspaper "English", 40/2000, p. 14)

Since its dedication on October 28, 1886, the magnificent Statue of Liberty, which stands in New York Harbor, has welcomed millions of immigrants, foreign visitors, and citizens returning to the United States from abroad. The idea for such a statue originated in France during the early 1870s. Having just adopted a republican form of government, the French people wanted to pay special tribute to the United States, the first modern republic, on the occasion of its 100<sup>th</sup> anniversary in 1876. The gift chosen to symbolize the lasting friendship between the two countries was Frederic Auguste Bartholdi's statue "Liberty Enlightening the World". In 1875 the newly organized Franco-American Union began to solicit contributions to finance the statue's construction, and by the time of its completion in 1884 the French people had donated the entire cost of \$250,000.

Bartholdi himself selected the 12-acre Bedloe's Island (renamed Liberty Island in 1960) as the permanent site for its statue, and the United States Congress agreed to its being used for this purpose. To provide a suitable base for the 225-ton figure, Americans subscribed \$350,000. This money financed the building of a concrete and granite pedestal, and in 1886 the Statue of Liberty was placed upon this structure to begin its symbolic vigil in New York Harbor.

Approximately 800,000 persons visit Liberty Island each year. Boats leave Manhattan's Battery Park for the island frequently during the day, and those who make the 1.6-meter trip to inspect the statue at close range are well rewarded for their efforts. The main point of interest is the hollow interior of the statue. An elevator takes sightseers to the top of the pedestal, but from there those who wish to venture higher, up to the statue itself, must walk. A climb of 168 steps leads to the statue's head, where there is an observation platform. On a clear day, this platform affords a magnificent view of the harbor and the New York skyline. The right arm and the torch are no longer open to the public.

A bronze plaque was affixed to the pedestal of the Statue of Liberty in 1903. On this tablet is engraved the famous excerpt from "The New Colossus" by Emma Lazarus:

Give me your tired, your poor,  
Your huddled masses yearning to breathe free,  
The wretched refuse of your teeming shore,

Send these, the homeless, tempest-tossed, to me;  
I lift my lamp beside the golden door.

In 1937 the statue, which with its pedestal is 305 feet high, was declared a national monument, and since that time the National Park Service has administered the site. In 1964 the Park Service began construction on the American Museum of Immigration at the base of the statue. Opened in 1972, the museum contains an exhibit hall where dioramas, paintings, and other materials depict the contributions of the various national and ethnic groups to American history.

By Glen Black

### **Ever Tried Talking to a Computer?** (Reader's Digest, April, 2002, p. 25)

Technology has changed people and their lives. No period in history has had as many significant changes as the past century. Improvements of all kinds, such as those in communication and transportation have seriously changed many people's lives – not all positively. Many people are conservative. They do not like and cannot accept the new results of technology. Conservative people often resist the new. They might prefer to take trains instead of airplanes and to receive letters instead of phone calls. They might like soft, gentle music rather than fast, noisy modern music. Above all, many conservative people find the increasing use of computers confusing, annoying and impersonal.

Computers are an obvious part of technology that reaches into most people's lives. Computers answer telephones, retrieve information instantly, read and answer letters, and make mathematical computations in much less time than a person can. However, how do people react as the use of the computer increases in their daily lives? There is a big difference between talking to a human being about a mistake on a bill and trying to tell a computer. A computer does not treat people in a human way. After all, it is only a machine. A person who learns to use any machine can benefit from its services. The same is true for the computer. The investment of time and patience that a person makes in learning how to use a computer pays off many times. What can a computer do? A computer can easily perform simple and complex calculations. It can record all kinds of information. It can sort material either alphabetically or in number of sequence. It can classify, report,

and edit data, information that is put in. The only requirement is that the computer must be correctly programmed to perform these functions, or jobs. Once a program is set, many people can use it to make it work for them. A computer programmer is a person who is trained to program or communicate with computers. In a sense, he teaches the computer to do the work by writing a program. He uses special computer languages to control and instruct the different parts of the computer. He writes a program, the detailed set of instructions for the computer, in a computer language.

Computers have so many everyday uses that the business world would stop without them. They can reserve airplane tickets, keep bank accounts, rent cars, control prices, order goods and supply, process registrations cards, keep inventories, record grocery items, and houses for sale. All of these jobs can be done, and many more, in a fraction of the time that a person would need. By using computers, people in business save large amounts of time. Whether people realize it or not, computers control so many parts of society that, without them, people's lives would be much more difficult. For every mistake on a bill, the computer does a million others right. Computers save great amounts of time by doing uninteresting jobs that take people a long time. Computers are designed for repetitive projects, for processing and storing a large amount of data, and for accuracy and speed. By using computers, human beings can free themselves to do more human projects.

By Peter Swanson

### **An Unsolved Mystery** (Newspaper "English", 23/2002, p. 13)

In the summer of 1978 an English farmer named Ian Stevens was driving his tractor through a field of wheat when he discovered something strange. Some of his wheat was lying flat on the ground. The flattened wheat formed a circle about six meters across. Around this circle were four smaller circles of flattened wheat. The five circles were in a formation like five dots on dice.

Three years later a farmer who lived nearby discovered similar circles in one of his fields. These circles were larger – nearby 15 meters across. That same year, yet another English farmer discovered three circles of flattened wheat on his land – one large circle between two small circles.

During the following years, farmers in England found the mysterious circles in their fields more and more often. In 1987 they discovered 50 circles; in 1988, 98 circles; and in 1989, 270 circles.

The circles are called “crop circles” because they appear in the fields of grain – usually wheat or corn. The grain in the circles lies flat on the ground but is never broken; it continues to grow horizontally, and farmers can later harvest it. Farmers always discover the crop circles in the morning, so the circles probably form at night. They appear only in the months from May to September. What causes the crop circles?

At first, people suspected that the circles were a hoax. They thought that teenagers were making them as a joke, or that farmers were making them to attract tourists. (In fact, in 1991, two men said they made the circles themselves, but many scientists don’t believe them.) To prove that the circles were a hoax, people tried to copy them: they tried to make circles exactly like the ones the farmers had found. They couldn’t enter a field of grain without leaving tracks, and they couldn’t flatten the grain without breaking it. The crop circles are apparently not a hoax.

Many people believe that beings from outer space are making the circles. Some think that the beings are trying to communicate with us from far away and that the crop circles are messages from them. Others believe that the beings have actually landed on earth and that the circles are marks left by their spaceships. Several times people reported seeing strange flying objects near the fields where crop circles later appeared.

Scientists who have studied the crop circles say they are not sure what causes them. They have suggested several theories. For example, some scientists say that “microbursts” of wind create the circles. A microburst is a downward rush of air that sometimes causes an airplane to crash. Other scientists say that forces within the earth cause the circles to appear. There is one problem with all the scientific theories. Crop circles often appear in formations, like the five-dot formation that Ian Stevens found. It is hard to believe that any natural force could create those formations. And recently farmers have discovered not only circles but also rectangles, triangles, and other shapes in their fields. Could any natural force create a perfect triangle in a field of grain?

In the summer of 1990 some scientists spent three weeks in the part of England where many circles have appeared. They had all the latest high-tech equipment. This equipment – worth 1.8 million dollars – recorded nothing. But one night, as the scientists were watching a field,

crop circles formed in the field behind them. The scientists had neither seen nor heard anything.

When Ian Stevens discovered the crop circles on his land in 1978, he said, “It was just like something had landed in the field from the air and gone back up again. I don’t know what to make of these things.”

Crop circles have appeared not only in England, but also in fields of Japan, the United States, the Soviet Union, and New Zealand. Experts from all over the world have studied them. What do experts say about the crop circles? They say what Ian Stevens said: They don’t know what to make of these things.

By Margaret Luis

### **The Story of Atlantis**

(Newspaper “English“, 23/2002, p. 16)

Over 11,000 years ago there existed an island nation located in the middle of the Atlantic Ocean populated by a noble and powerful race. The people of this land possessed great wealth thanks to the natural resources found throughout their island. The island was a centre for trade and commerce. The rulers of this land held sway over the people and land of their own island and well into Europe and Africa. This was the island of Atlantis.

Atlantis was the domain of Poseidon, god of the sea. When Poseidon fell in love with a mortal woman, Cleito, he created a dwelling at the top of a hill near the middle of the island and surrounded the dwelling with rings of water and land to protect her.

Cleito gave birth to five sets of twin boys who became the first rulers of Atlantis. The island was divided among the brothers with the eldest, Atlas, first King of Atlantis, being given control over the central hill and surrounding areas.

At the top of the central hill to honour Poseidon, a temple was built which housed a giant gold statue of Poseidon riding a chariot pulled by winged horses. It was here that the rulers of Atlantis would come to discuss laws, pass judgments, and pay tribute to Poseidon.

To facilitate travel and trade, a water canal was cut through of the rings of land and water ran south for 5,5 miles (~9 km) to the sea.

The city of Atlantis sat just outside the outer ring of water and spread across the plain covering a circle of 11 miles (1,7 km). This was a densely populated area where the majority of the population lived.

Beyond the city lay a fertile plain 330 miles (530 km) long and 110 miles (190 km) wide surrounded by another canal used to collect water from the rivers and streams of the mountains. The climate was such that two harvests were possible each year. One in the winter fed by the rains and one in the summer fed by irrigation from the canal.

Surrounding the plain to the north were mountains which soared to the skies. Villages, lakes, rivers, and meadows dotted the mountains.

Besides the harvests, the island provided all kinds of herbs, fruits, and nuts. An abundance of animals, including elephants, roamed the island.

For generations the Atlanteans lived simple, virtuous lives. But slowly they began to change. Greed and power began to corrupt them. When Zeus saw the immorality of the Atlanteans he gathered the other gods to determine a suitable punishment. Soon, in one violent surge it was gone. The island of Atlantis, its people, and its memory were swallowed by the sea.

This is a summary of the story told by Plato around 360 BC in his dialogues *Timaeus* and *Critias*. These writings of Plato are the only specific known references to Atlantis. They have prompted controversy and debate for over two thousand years.

By Nadezhda Plotnikova

**Bermuda (or “Devil’s”) Triangle**  
(Newspaper “English“, 23/2002, p. 16)

The Bermuda Triangle is a triangular area in the Atlantic Ocean bounded roughly at its points by Miami, Bermuda, and Puerto Rico. Legend has it that many people, ships and planes have mysteriously vanished in this area. How many have mysteriously disappeared depends on who is doing the locating and the counting. The size of the triangle varies from 500,000 square miles to three times that size, depending on the imagination of the author. (Some include the Azores, the Gulf of Mexico, and the West Indies in the “triangle.”) Some trace the mystery back to the time of Columbus. Even so, estimates range from about 200 to no more than 1,000 incidents in the past 500 years. Howard Rosenberg claims that in 1973 the U.S. Coast Guard answered more than 8,000 distress calls in the area and that there have been more than 50 ships and 20 planes go down in the Bermuda Triangle within the last century.

Many theories have been given to explain the extraordinary mystery of these missing ships and planes. Evil extraterrestrials, residue crystals from Atlantis, evil humans with anti-gravity devices or other weird technologies and vile vortexes from the fourth dimension are favourites among fantasy writers. Strange magnetic fields and oceanic flatulence (methane gas from the bottom of the ocean) are favourites among the technically-minded. Weather (thunderstorms, hurricanes, tsunamis, earthquakes, high waves, currents, etc.), bad luck, pirates, explosive cargoes, incompetent navigators, and other natural and human causes are favourites among skeptical investigators.

There are some skeptics who argue that the facts do not support the legend and that there is no mystery to be solved, nothing that needs explaining. The number of wrecks in this area is not extraordinary, given its size, location and the amount of traffic it receives. Many of the ships and planes that have been identified as having disappeared mysteriously in the Bermuda Triangle were not in the Bermuda Triangle at all. Investigations to date have not produced scientific evidence of any unusual phenomena involved in the disappearances. Thus, any explanation, including so-called scientific ones in terms of methane gas being released from the ocean floor, magnetic disturbances, etc., are not needed. The real mystery is how the Bermuda Triangle became a mystery at all.

The modern legend of the Bermuda Triangle began soon after five Navy planes vanished on a training mission during a severe storm in 1945. The most logical theory is that lead pilot Lt. Charles Taylor’s compass failed. The trainees’ planes were not equipped with working navigational instruments. The group was disoriented and simply, though tragically, ran out of fuel. No mysterious forces were likely to have been involved other than the mysterious force of gravity on planes with no fuel. It is true that one of the rescue planes blew up shortly after take-off, but this was likely due to a faulty gas tank rather to any mysterious forces.

Over the years there have been dozens of articles, books, and television programs promoting the mystery of the Bermuda Triangle. In his study of this material, Larry Kushe found that few did any investigation into the mystery. Rather, they passed on the speculations of their predecessors as if they were passing on the mantle of truth. Of the many uncritical accounts of the mystery of the Bermuda Triangle, no one has done more to create this myth than Charles Berlitz, who had a

bestseller on the subject in 1974. After examining the 400-page official report of the Navy Board of Investigation of the disappearance of the Navy planes in 1945, Kushe found that the Board wasn't baffled at all by the incident and did not mention alleged radio transmissions cited by Berlitz in his book. According to Kushe, what isn't misinterpreted by Berlitz is fabricated. Kushe writes: "If Berlitz were to report that a boat were red, the chance of it being some other color is almost a certainty." (Berlitz, by the way, did not invent the name; that was done by Vincent Gaddis in "The Deadly Bermuda Triangle, "which appeared in the February, 1964, issue of Argosy, a magazine devoted to fiction.)

In short, the mystery of the Bermuda Triangle became a mystery by a kind of communal reinforcement among uncritical authors and a willing mass media to uncritically pass on the speculation that something mysterious is going on in the Atlantic.

By Nadezhda Plotnikova

### Yeti

(Newspaper "English", 23/2002, column "Wondering Wanderers", p. 16)

Sightings of this creature were a regular occurrence during the nineteenth and twentieth centuries. Extensive research has been undertaken to establish whether the yeti actually exists on the snowfields of the Himalayas of Nepal and Tibet. This omnivorous creature, so often featured in horror movies, has been seen in different forms, and is sometimes referred to as the "abominable snowman", or "meh-teh". One description of the creature is that of an animal that walks upright, having thick ragged fur that is red-brown in color, and stands approximately 1.8m tall. Some have reported that the meh-teh is similar in appearance to an ape with a dome-shaped head, large feet and a broad mouth. Research by zoologists compares the yeti to the orangutan.

Sir Edmund Hillary, the explorer, alleged to come into contact with the yeti on several occasions, the most publicized being in 1960. A scalp believed to be that of the creature was revered by locals in a remote monastery but on examination was revealed to belong to a mountain goat/antelope.

The latest reported sighting was in 1972 when footprints were found by Eric Shipton, Edward Cronin and Dr Howard Emery on an expedition in Nepal. The footprints were found amidst the base camp in a valley between Everest and Kanchenjunga, and followed a path from

the camp to a steep incline. The expedition agreed that the incline was extremely treacherous and would be virtually impossible for a human to climb. A mould of the footprint was taken for future research by Jeffrey McNeely.

In 1959 an expedition was launched by Tom Slick to discover new evidence. Yeti droppings were recovered and brought for future investigation. A new species of nematode worm was discovered, which according to scientists, will only be found to be linked to one type of animals. As this species of worm is known not to be linked to any other animal this evidence has been accepted as proof towards the yeti's existence.

By Nadezhda Plotnikova



## ПРИЛОЖЕНИЕ

### English as a World Language

(Headway: Student's Book, Upper-Intermediate; 1996, p. 2)

Today, when English is one of the major languages, in the world, it requires an effort of the imagination, to realize that this is a relatively recent thing – that in Shakespeare's time, for example, only a few million people spoke English, and the language was not thought to be very important by the other nations of Europe, and was unknown to the rest of the world.

English has become a world language because of its establishment as a mother tongue outside England, in all the continents of the world. This exporting of English began in the seventeenth century, with the settlements in North America. Above all, it is the great growth of population in the United States, assisted by massive immigration in the nineteenth and twentieth centuries, that has given the English language its present standing in the world.

People who speak English fall into one of three groups: those who have learned it as their native language; those who have learned it as a second language in a society that is mainly bilingual; and those who are forced to use it for a practical purpose – administrative, professional or education. One person in seven of the world's entire population belongs to one of these three groups. Incredibly enough, 75 % of the world's mail and 60 % of the world's telephone calls are in English.

Old English, like modern German, French, Russian and Greek, had many inflections to show singular and plural, tense, person, etc., but over the centuries words have been simplified. Verbs now have very few inflections, and adjectives do not change according to the noun.

As a result of the loss of inflections, English has become, over the past five centuries, a very flexible language. Without inflections, the same word can operate as many different parts of speech. Many nouns and verbs have the same form, for example swim, drink, walk, kiss, look, and smile. We can talk about water to drink and to water the flowers; time to go and to time a race; a paper to read and to paper a bedroom. Adjectives can be used as verbs. We warm our hands in front of a fire; if clothes are dirtied, they need to be cleaned and dried. Prepositions too are flexible. A sixty-year old man is nearing retirement; we can talk about a round of golf, cards, or drinks.

Openness of vocabulary involves the free admissions of words from other languages and the easy creation of compounds and derivatives. Most world languages have contributed some words to English at some time, and the process is now being reversed. Purists of the French, Russian, and Japanese languages are resisting the arrival of English in their vocabulary.

Geographically, English is the most widespread language on Earth, second only to Mandarin Chinese in the number of people who speak it. It is the language of business, technology, sport, and aviation. This will no doubt continue, although the proposition that all other languages will die out is absurd.

### Реферат

1. The headline of the article is "English as a World Language". It comes up from textbook "Headway: Student's Book, Upper-Intermediate" by John and Liz Soars. The textbook was published by Oxford University Press and dated 1996. The article is placed on page 2. The author of the article is unknown.

2. This issue refers to the field of linguistics and concerns the points from the history and some features of the English language.

3. The central topic of the article is history, usage, basic characteristics and future of English.

4. The article opens in a description of the English language in Shakespeare's time. The author says that only a few million people spoke English at that time and it wasn't very important as it was unknown to the rest of the world. Then he explains how English became a world language because of its establishment as a mother tongue outside England in the 17<sup>th</sup> and later in the 19<sup>th</sup> and 20<sup>th</sup> centuries, assisted by massive immigration. Further on, the author reveals that people who speak English can be divided into three groups: speaking it as native language, learning it as a second one or being forced to use it for some practical purpose. He backs the given information with statistics that 75 % of the world's mail and 60 % of all the telephone calls are in English. After that, the article informs is about several basic characteristics of the language. It brings to the forefront the simplicity of form. Going on, the author emphasizes the flexibility, which means using one and the same word as different parts of speech, for example, drink, smile, walk, etc. And finally the author tells about the openness of English vocabulary, which involves free admission of words from other languages.

The author draws a conclusion saying that geographically English is the most widespread language on Earth. But he admits that it is second only to Mandarin Chinese in number of people speaking it.

He tries to predict that English will continue developing and spreading, but that doesn't mean all other languages will die out.

5. I find this article very interesting and informative. I quite agree with the author who says English is a world language.

The article is aimed to acquaint the readers with some aspects of the English language. It is intended for people learning English.

#### Аннотация

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# ОБУЧЕНИЕ УСТНОЙ И ПИСЬМЕННОЙ НАУЧНОЙ РЕЧИ

Методические указания  
по английскому языку для аспирантов

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ХАНТЫ-МАНСИЙСКИЙ АВТОНОМНЫЙ ОКРУГ ТЮМЕНСКОЙ ОБЛАСТИ  
ДЕПАРТАМЕНТ ОБРАЗОВАНИЯ И НАУКИ ХМАО  
СУРГУТСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ ХМАО  
Кафедра лингвистики и межкультурной коммуникации

# ОБУЧЕНИЕ УСТНОЙ И ПИСЬМЕННОЙ НАУЧНОЙ РЕЧИ

Методические указания  
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Сургут  
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Обучение устной и письменной научной речи: Метод. указания по английскому языку для аспирантов / Сост. Т.А. Аксенова; Сургут. гос. ун-т. – Сургут: Изд-во СурГУ, 2003. – 25 с.

Цель методических указаний в области письменной речи – оказание помощи в составлении тезисов, написании докладов и статей; в области устного общения – формирование умения общаться на английском языке на научные темы, принимать участие в учебной дискуссии.

Учебные тексты, представленные в методическом указании, отобраны из различных отечественных и аутентичных пособий и адаптированы к условиям СурГУ.

Предназначены для аспирантов и соискателей как начинающих исследователей.

Печатается по решению редакционно-издательского совета Сургутского государственного университета ХМАО.

Рецензент Е.И. Путятина, канд. филол. наук, доцент.

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1. Прочтите текст.
2. Выпишите 10 наиболее важных, с вашей точки зрения содержания, предложений.

### TAKING A POST-GRADUATE COURSE

1. This year by the decision of the Scientific Council I took post-graduate courses to increase my knowledge in radioelectronics. I passed three entrance examinations – in philosophy, English and the special subject. So now I am a first year post-graduate student of the Surgut state University. I'm attached to the Computing Machinery Department. In the course of my post-graduate studies I am to pass my candidate examinations in philosophy, English and the special subject. So I am going to attend courses of English and philosophy. I'm sure the knowledge of English will help me in my scientific research.

2. My scientific research deals with radioelectronics. The theme of the dissertation (thesis) is «Computer-Aided Engineering Tools for...». I was interested in the problem when a student so by now I have collected some valuable data for my thesis.

3. I work in close contact with my scientific adviser (supervisor). He graduated from the Moscow State University 15 years ago and got his doctoral dissertation at the age of 35. He is the youngest Doctor of Sciences at our University. He has published a great number of scientific papers in journals not only in our country but also abroad. He often takes part in the work of scientific conferences and symposia. He made a great contribution into the field of computing machinery. When I encounter difficulties in my work I always consult my scientific adviser.

4. At present I am engaged in making an experiment. I hope it will be a success and I shall be through with my work in time.

- 1) Прочтите второй абзац и ответьте на следующий вопрос:  
*What is the theme of your dissertation?*
- 2) Прочтите третий абзац и по-английски расскажите о Вашем научном руководителе в соответствии со следующим планом:  
*a) Doctor's degree; b) Scientific publications; c) Participation in the work of scientific conferences; d) Honorary awards.*
- 3) Сообщите своему коллеге:  
*a) What candidate examinations you have already passed; b) What the theme of your dissertation is; c) How many scientific papers you have published; d) If you are busy with making an experiment.*
- 1) Прочтите текст и ответьте на вопросы.

## MY RESEARCH WORK (Шелягова Т.Г. и др.)

I'm an engineer of the microelectronics chair (department) of Surgut state University. My special subject is the technology of radio and microelectronics devices. I combine practical work with scientific research. So I'm a doctoral candidate (соискатель).

I'm doing research in hybrid circuit technology, which is now widely accepted for all types of electronic products. This branch of knowledge has been rapidly developing lately. The obtained results have already found wide application in most varied spheres of the country's national economy.

I'm particularly interested in that part of hybrid circuit technology, which includes the production of passive elements of circuits by electrochemical oxidation of metals. I have been working at the problem for two years. I got interested in it when a student. My work is primarily of practical importance. It is based on the theory developed by the collaborators of our department. So I can say that I work in close cooperation with my colleagues. We also closely collaborate with several enterprises of our town and our country.

There are several research teams at our department. The team I work in is headed by Doctor of Technical Sciences Petrov. He is my scientific adviser. I always consult him when I encounter difficulties in my research. We often discuss the obtained data.

In my work I make use of various tools and instruments – potentiometers, electrochemical cells, measuring and registering devices. The methods used in my work are: anodizing in a galvanostatic regime, oxidation in a cathode regime and some others.

The obtained data enabled me to define more precisely the theoretical model of anodic oxide films growth.

I have not yet completed the experimental part of my thesis (dissertation), but I'm through with the theoretical part. For the moment I have 10 scientific papers, some of which were published when I was a student. Two of them were published in the journals of Japan and Austria.

I take part in various scientific conferences where I make reports on my subject. I willingly participate in scientific discussions and debates.

I'm planning to finish writing the dissertation by the end of the next year and prove it in the Scientific Council of the Surgut State University. I hope to get the scientific degree of a Candidate (Master) of Technical Sciences.

I. Прочтите текст еще раз и найдите ответы на следующие вопросы:

1. *What are you?* 2. *What is your special subject?* 3. *What field of knowledge are you doing research in?* 4. *Have you been working at the problem long?* 5. *Is your work of practical or theoretical importance?* 6. *Who do you collaborate with?* 7. *Who is the team you work is headed by?* 8. *When do you consult your scientific adviser?* 9. *What kind of instruments do you make use of in your research?* 10. *What are the methods used in your work?* 11. *Have you completed the experimental part of your work?* 12. *How many scientific papers have you published?* 13. *Do you take part in the work of scientific conferences?* 14. *Where and when are you going to get your Candidate's (Master's) degree?*

II. Выпишите предложения, которые вы можете использовать для сообщения о вашей исследовательской работе.

III. Расскажите о вашей работе, используя выбранные предложения.

Прочтите текст и обсудите с коллегами, почему идеальный научный руководитель должен обладать этими качествами.

Аргументируйте свою позицию.

## THE IDEAL SCIENTIFIC SUPERVISOR (Плужник И.Л.)

Several scientific efforts have been made in the United States to establish the personality structure of the ideal scientific supervisor. Ladislas Farago in his book «War of Wits» lists ten groups of character traits, which a good scientific supervisor is supposed to possess:

1. His morals must be high and he must be genuinely interested in the job ahead. 2. He must be energetic, zealous, and enterprising. 3. He must be resourceful, and a quick thinker. He must know how to deal with things, people, and ideas. He must be proficient in some occupational skill. 4. He must be emotionally stable: capable of endurance under stress. 5. He must have the ability to get along with other people, and to work as a member of a team. 6. He must know how to inspire collaboration, to organize, administer, and lead others. He must be willing to accept responsibility. 7. He must have a passion for lecturing and research, and know how to do it. 8. He must be able to get hold of the required equipment ahead of others. 9. He must be agile, strong and daring. 10. He must be able to memorize details, evaluate his observations, and relate them to the greater complex things.

- 1) Вам предстоит выступить с докладом на научной конференции.  
Прочтите следующие рекомендации.

### HOW TO SPEAK IN PUBLIC (Григорьева И.А.)

The chances are that at some point in your career you will need to speak in public. That doesn't necessarily mean that you'll be speaking at a huge conference – you could be heading a meeting, or putting your case to the boss for a pay rise. Or you may be asked to address colleagues because you have a particular area of strength, which you could impart to others. Whatever the occasion, if it's your first time then it's likely to be a bit daunting.

With some careful preparation and a couple of rehearsals, you can smooth out any potential difficulties and combat nerves, too. Don't see it as an ordeal - it's an opportunity to enhance your work profile and to make a good impression. Follow these steps and think positive!

#### Be prepared

- Find out why you are there, what is expected of you, how much time you have and who you will be addressing. If you are unclear about *anything*, ask the person in charge.
- Note down the points you want to make. Don't try to memorize a whole speech – key words on index cards are often useful.
- Check and double-check any technical equipment, such as microphones and slide projectors. Also, make sure you know where the power switch is and how to operate the equipment. It's your responsibility; so don't leave this to someone else! If you are using an awkward item, such as a flip chart, ask a colleague to give you some help.
- Have a rehearsal beforehand. This doesn't mean memorizing your talk word for word; do whatever feels right. Get a friend to sit in and ask for her/his comments.
- If you have spoken in public before, what was the outcome? Were you pleased with your performance? If not, consider where you went wrong and make any changes you think are necessary.

#### Coping with nerves

- Public speaking can make even the most confident people nervous. Don't get events out of perspective. If you prepare well there is no reason for anything to go wrong.

- Take a couple of deep breaths before starting and keep your voice at a relatively low pitch, but *do* remember to speak up!
- Don't drink alcohol or carbonated drinks beforehand. Have a glass of still water nearby, in case your throat dries up. Take small sips, if you feel you need to, when you are speaking.
- Go at your own pace. If you lose track of what you're saying, stop for a couple of seconds, focus and continue. Those few seconds will not seem as long to anyone else as they will to you.
- *You* are in control. Think of a professional achievement you are proud of and keep it in the back of your mind. Remind yourself that you've come far and you *can* do this.
- Speak clearly and *relax*! Smiling loosens up your vocal chords and is a good way of establishing rapport with people before you even start to talk. Also, yawning without opening your mouth is a good way to relax your throat.
- If you are particularly shy, or you suffer from panic attacks, take a course that's specific to your area of weakness.

#### Your appearance

- Wear an outfit that you know and love, not something new or fussy. If you feel comfortable then you will give a confident impression.
- Keep your body relaxed and use controlled gestures and pauses for emphasis, if they come naturally.
- Be careful not to move around *too* much during your talk, as this will distract your audience.
- Strike up eye contact if possible.

#### What you say

- Most people see meetings and presentations as a waste of time; don't let your big moment be like that. Say what you need to say as clearly and concisely as possible. Repeat key phrases/points at the end.
- Any new information you can incorporate into your speech, such as recent statistics, will help to keep your audience interested. However, be careful not to base your whole talk on statistics and background information. Also, try to avoid using jargon.
- At the end of your talk, if relevant, ask if there are any questions. Don't let anyone sidetrack you – if asked a question you don't want to answer straightaway, say you will come back to it and do, briefly.

- Tell them something they don't already know. You can be sure that if you speak effectively, people will remember you for it.
- With a small audience, select one person to look at first. Once you've made the connection, move onto someone else. Reach «everyone» in your audience by tracing a random zig-zag around the room. If you approach people row by row, you'll lose others in your audience.
- Hold your eye contact approximately three to five seconds. Finish a brief thought, phrase or idea before moving on to the next person.
- With a larger audience, begin your eye contact with people in the back corners of the room, which tend to be neglected. Hold your contact longer – perhaps 10 to 25 seconds. People in the central area will think you're looking them.
- When connecting with a listener, look at one eye or the other, or the general facial area. Avoid staring.
- Remember that some people don't like to be looked at. Individuals who are shy, easily intimidated or auditory learners will quickly look away when your glance meets theirs. In some Asian cultures, direct eye contact is rude. So, when you sense you've invaded someone's space, scan in their direction but avoid making a connection that will leave them uncomfortable.
- After you've made contact with members of your audience, nod periodically. People will usually indicate they're «buying in» by nodding back. By using these easy steps, you'll feel more comfortable using eye contact and will connect better with your audience to sell your ideas.

2) Перечислите самые важные, на ваш взгляд, пункты.

1) Вам предстоит выступать в качестве председателя научной конференции.

Ознакомьтесь с образцом вступительной речи.

**AN OPENING ADDRESS (A MODEL)**  
**(Образец вступительной речи председателя)**  
**(Григорьева И.А.)**

Chairman: Distinguished guests, ladies and gentlemen, dear colleagues! It is a great pleasure for me as Chairman of the Organizing Committee to welcome you to the International Symposium on Semiconductor Device Research sponsored by the Division of Chemical Physics of the American Physical Society. I would like to give a special welcome to the President of the American Physical Society, Professor

Keneth Johnson who has found the time to attend our meeting. I express our warmest welcome to the Assistant Director of the Massachusetts Institute of Technology, Professor Charles Stucky. I am sure you will join me in extending a particular welcome to our colleagues from other countries. We are pleased that so many outstanding researchers from all over the world have come to attend this Symposium. We would like to convey our best wishes to all the participants and guests. Two years have passed since our last meeting in Germany. It is a short time, but it has turned out to be very fruitful. There has been remarkable progress in our understanding of the device operation and some underlying phenomena. The most notable achievement is the discovery of room temperature superconductivity. It has brought about improvement in structure technology and in designing new devices and materials. However, our knowledge of the mechanism of superconductivity still remains incomplete. Our main goal in holding this Symposium is to discuss various aspects of new materials for semi- and superconductor structures. The range of subjects to be considered is quite large. But it is our hope that the Symposium will show the current state of things in this rapidly developing area and stimulate new ideas. Because the meeting has brought together scientists with different points of view, with different backgrounds of training and experience, we expect stimulating discussions of theoretical and experimental problems. I wish you success. Thank you.

2) Выучите речь наизусть.

1) Прочитайте образец для написания научного доклада.

**A MODEL FOR A PAPER**  
**(Образец для написания доклада)**

Thank you, Mr. Chairman. I am happy to have this opportunity to present my paper at this working group session. The purpose of this study was to understand the mechanism of intersubband scattering in two-dimensional electron gas in heterostructures. It is well known that some interesting research has been done in this field in recent years. Yet, it is not clear why interband scattering rate does not increase with temperature. So the aim of this work was to find an explanation for the temperature dependent intermodulation. We suggest an explanation in terms of oscillations in the Fermi level, which is confirmed by a model calculation. Now let me discuss in some detail the data we have obtained and the conclusions we have drawn.



I would like to start by showing some slides. (To the projectionist.) The first slide, please. Here we see the intermodulation as a function of temperature. The data have been multiplied by a factor of 2.5 to better display the low field region. Let's have a look at this plot. (To the projectionist.) Next slide, please. This is a Dingle plot for a sample with only subband occupied. I would like to stress that the amplitude of the resistance oscillations has been corrected for temperature. The full circles are for the low frequency that is for the upper subband. The open circles are for the high frequency, or the lower subband. Please, note the difference between the two lines, which are least-square fits to the data. I'm afraid we'll have to skip the next two slides, because we're short of time. (To the projectionist.) Can we see the last slide, please? This slide demonstrates the relationship between the experimental data and the model calculations, and you can see a good agreement.

This enables us to make the following conclusion. When a semiclassical treatment of the amplitude of the low field oscillations in two-dimensional systems is extended to the case of the two occupied subbands, the intercept of the Dingle plots depends on the intersubband scattering. In particular, in some cases the intercept depends on the intersubband fraction of scattering for most of the carries. Experimental results agree with this theory and show that in the heterojunction investigated approximately one third of the scattering is intersubband. In contrast with a previous interpretation, we attribute the phenomenon to oscillations in the Fermi energy rather than to the acoustic phonons. Our explanation is supported by a model calculation. With this I would like to finish. If there are questions I'll be glad to answer them. Thank you.

2) По данному образцу составьте сообщение по теме вашего исследования.

1) Ознакомьтесь с рекомендациями, как следует вести себя на защите.

**HOW TO STAND UP FOR AN ACADEMIC DEGREE.  
INSTRUCTION TO POST-GRADUATE STUDENTS  
(Плужник и др.)**

It is no good writing a long thesis: it is not the novel «War and Peace» and you are not Leo Tolstoy. It is no use writing it briefly either: it either testifies to your great talent or lack of brains. Your opponents will forgive neither.

Do not put on airs: it is not worth thinking that you alone are clever and all others are fools. Avoid using the arrogant first person singular: instead of saying «I assume» use «It is assumed ...» or «We suppose ...».

Try the scientific value of your paper on your relatives and colleagues. If your paper is sophisticated enough, they will start yawning and fall asleep in no time, while listening to it or reading it.

The sections that cause first of laughter or anxiety need rewriting.

Although you will enjoy listening to the compliments of experienced people, do not be deceived by their singing praises to you.

Avoid inviting young scholars as your would be opponents: they are always glad to jump at the opportunity of showing off and discrediting others. It is always more practical to invite merited and older scientists because the older they become the kinder and lazier they get.

If you aim at achieving success, read your paper in front of a mirror even if you dislike doing it.

- 1) Обсудите прочитанное с коллегами.
- 2) Составьте письменное сообщение по памяти.

**WRITING THESIS**

- 1) Прочтите образец составления тезисов.
- 2) Сопоставьте русский и английский варианты, выделите структуры, которые вы можете использовать при написании своих тезисов.

**Обзор теорем разложения цели в РЛ поляриметрии**  
(Перевод В.И. Карнышева, О.В. Стукача)

**A Review of Target Decomposition Theorems in Radar Polarimetry**

Ш.Р. Клауд, Э. Потье

S.R. Cloude, E. Pottier

В этой статье мы даем критический обзор различных теорем разложения цели (ТР) применительно к задаче отображения в поляриметрических РЛС с синтезированной апертурой (СА) и инверсных РЛС с СА. Такие теоремы оказывают сильное влияние на

In this paper we provide a critical review of the various target decomposition (TD) theorems applied to polarimetric SAR and ISAR imagery. Such theorems have great potential impact for the interpretation and analysis of Radar Imagery for remote sensing applications.

интерпретацию и анализ РЛ изображений в задачах дистанционного зондирования.

Сама концепция разложения цели была впервые предложена Дж.Р. Хойненом и связывалась с факторизацией матрицы Стокса при обратном рассеянии случайными средами. С того времени в литературе был предложен ряд других разложений и проведено интенсивное обсуждение вопросов физической интерпретации и инвариантности преобразования. В данной статье мы, представляем новейший обзор этих методов, акцентируя внимание на сильные и слабые стороны и демонстрируя их применение в задаче формирования изображений в РЛС с СА и инверсных РЛС.

Для большинства целей, представляющих интерес при дистанционном зондировании, требуется статистическое описание со многими переменными, что обусловлено сочетанием шума когерентного спекла и эффектов случайного векторного рассеяния поверхностью или объемом. Для таких РЛ целей интерес представляет выработка концепции среднего, или преобладающего, механизма рассеяния, которая предназначена для классификации или обращения данных рассеяния. Теоремы разложения цели предназначены для

The concept of target decomposition was first introduced by J.R. Huynen and related to factorization of the Stokes matrix for backscatter from random media. Since then there have been several other decompositions suggested in the literature and much debate over questions of physical interpretation and transformation invariance. In this paper we provide an up-to-date review of these methods, pointing out their strengths and weaknesses and illustrating their application to experimental SAR and ISAR imagery.

Many targets of interest in radar remote sensing require a multivariate statistical description due to the combination of coherent speckle noise and random vector scattering effects from surface and volume. For such targets it is of interest to generate the concept of an average or dominant scattering mechanism for the purposes of classification or inversion of scattering data. TD theorems are aimed at providing such an interpretation based on sensible physical being invariant to changes in wave polarization base.

того, чтобы дать интерпретацию, в основе которой лежали бы такие разумные физические ограничения, как «средняя цель», являющаяся инвариантом по отношению к изменениям поляризационного базиса.

Мы покажем, каким образом унифицированный подход может быть использован для создания таких разложений, основанных на концепции изменения базиса цели и специальных унитарных групп. В заключение мы предлагаем подобную концепцию в виде унифицированной схемы для формулировки задач случайного рассеяния.

We show how a unified approach may be taken to the generation of such decompositions based on the concept of change of target base and the special unitary groups. We conclude by proposing such a concept as a unifying framework for the formulation of random scattering problems.

- I. Выделите в тексте переходы от одной мысли к другой.
- II. Выделите в тексте средства модальности и оценки сообщаемого.
- III. Составьте высказывание на основе тезисов.

Прочтите еще один образец тезисов. Выделите речевые средства, выражающие действия.

**Метод высокого разрешения с поляризационным разносом**  
(Перевод В.И. Карнышева, О.В. Стукача)

**High Resolution Method with Polarization Diversity**

Й. Ванг, Дж. Сайяр

Y. Wang, J. Saillard

В обычной РЛС со ступенчатым изменением частоты, когда импульсы обрабатываются в когерентном РЛ приемнике, отраженный сигнал содержит амплитудную, фазовую и поляризационную информацию;

In a typical stepped-frequency radar system, when pulses are processed coherently by the radar receiver, the returned signal contains amplitude, phase and polarization information; the amplitude is related to the size and

плитуда связывается с размером и отражаемостью цели, т. е. ЭПР, а фаза связывается с дальностью до цели. Амплитуда, фаза и поляризация также являются характеристиками цели. Классическая система использует единственную поляризацию. Доказывается, что учет поляризационного разноразности может улучшить характеристики системы.

Для сложных целей ЭПР не может быть получена аналитически, но при ВЧ-гипнозе такая цель может быть представлена в виде некоторой решетки, состоящей из дискретных центров рассеяния, возникающих преимущественно в зеркальных точках и геометрических разрывах этого тела. Каждый центр рассеяния характеризуется своей дальностью и комплексной амплитудой. Доказывается, что описание этих рассеивающих центров эквивалентно оценке параметров сигнала, состоящего из суммы синусоидов в белом шуме.

Обычный метод описания рассеивающих центров основан на быстром преобразовании Фурье (БПФ). Хорошо известно, что этот метод имеет ряд присутствующих ему ограничений по характеристикам. Наиболее существенным ограничением является то, что разрешение по частоте обратно пропорционально периоду наблюдения. Второе ограничение обусловлено неявным

reflectivity of the target, i. e. Radar Cross Section (RCS), and the phase related to the target range. The amplitude, phase and polarization are also characteristics of the target. The classical system works with a single polarization. It is shown that the consideration of the polarization diversity can improve the system performance.

The RCS can not be derived analytically for complex targets, but under high frequency hypothesis such target can be modeled as an array of discrete scattering centers occurring principally at secular points and geometrical discontinuities of the body. Each scattering center is characterized by its range and its complex amplitude. It is shown that the characterization of the scattering centers is equivalent to the parameters estimation of a signal composed of the sum of sinusoids embedded in white noise.

The conventional method for characterization of scattering centers is based upon the fast Fourier transform (FFT). It is well known that this method has several inherent performance limitations. The most important limitation is that of frequency resolution which is inversely proportional to the observation period. A second one is due to the implicit windowing of the data that occurs when process-

взвешиванием данных окном, которое происходит при обработке с использованием БПФ. Чтобы обойти эти ограничения, за последние годы было предложено много альтернативных процедур. Эти методы дали способ извлечения информации из отраженного поля о местоположении и коэффициентах рассеивающих центров. Было обнаружено, что данный способ превосходит обычный метод преобразования Фурье по разрешению и динамическому диапазону.

Однако в этих методах используется только одна поляризация и не используется дополнительная информация, которую дает поляризационный разнос. Поэтому оценить поляризационные параметры с целью получения большей информации об объекте не представляется возможным. В данной статье мы представим метод, основанный на концепции высокого разрешения, учитывающей поляризационный разнос сигналов. Для описания поляризационных свойств цели мы используем так называемую переходную поляризационную характеристику. Предложенный метод высокого разрешения объединяет всю информацию, доступную в принятом сигнале, полностью и оптимально использует поляризационные данные для улучшения характеристик системы. Мы покажем, что этот метод позволяет

ing with FFT. In order to alleviate such limitations, many alternative procedures have been proposed in recent years. These methods provided a way of extracting the locations and coefficients of scattering centers from the backscattered field. It has been found to be superior to the conventional Fourier transform technique in resolution and in dynamic range.

But these methods use only a single polarization. They do not exploit the additional information provided by the polarization diversity. So it is not possible to estimate the polarization parameters in order to gain more information about the object. In this paper, we will present a method based on the high-resolution concept with consideration of the polarization diversity of the signal. We use the so-called transient polarization response to characterize the polarization properties of the target. The proposed high resolution method combines all information obtainable in the received signal, uses the full polarization data simultaneously and optimally in order to enhance the performance of the system. We will show that this method can not only allow a fully characterization of the target with its amplitude, phase, distance and polarization, but also provide a

не только полностью описать цель с использованием амплитуды, фазы, расстояния и поляризации, но и обеспечить лучшие характеристики в смысле разрешения цели.

Будут представлены результаты моделирования с тем, чтобы высказать некоторые соображения относительно характеристик предложенного метода в сравнении с классическим методом, основанным на БПФ, и скалярным случаем метода высокого разрешения.

Составьте по образцам тезисы своего доклада.

#### TYPICAL CONSTRUCTIONS USED IN SCIENTIFIC SPEECH

(Типичные обороты, используемые в научной речи при составлении тезисов научных докладов)

A comparison of ... with... is made.	Делается сравнение... с...
A method of... is proposed.	Предлагается метод...
An approach to estimating... is presented.	Дается подход к оценке...
An attempt to... is made.	Делается попытка...
Data on... are discussed.	Обсуждаются данные по...
Discussion will focus on the problem of...	Обсуждение будет сфокусировано на...
I suggest that...	Я выдвигаю предположение, что...
Our hypothesis is that...	Наша гипотеза заключается в том, что...
Present data encompass a period of...	Настоящие данные охватывают период в...
The author introduces the concept of...	Автор вводит концепцию...
The design of the experiments was to reveal...	Эксперименты были направлены на выявление...

better performance in terms of resolution of the target.

Simulation results will be presented in order to give some ideas about the performance of the proposed method comparing with the classical FFT based method and the scalar case high-resolution method.

The effect of... on... is discussed.  
 The experimental foundation of the present discussion consists of...  
 The methods used for... are discussed.  
 The most important results are as follows...  
 The results indicate the dominant role of...  
 The results of... are discussed.  
 The results of observations are supported by...  
 This paper aims at...

This paper analyzes...

This paper concerns/considers/deals with...  
 This paper comments briefly on...

This paper contains...

This paper describes...

This paper discusses...

This paper examines...

This paper presents...

This paper reports on...

This study is an attempt to/attempts at...

We have been able to show that...

Обсуждается влияние... на...  
 Экспериментальная основа настоящего обсуждения состоит из...  
 Описываются методы, используемые для...  
 Самые важные результаты имеют следующий вид...  
 Результаты указывают на доминирующую роль...  
 Обсуждаются результаты...  
 Результаты наблюдений дополняются...  
 Настоящий доклад имеет своей целью...  
 В настоящем докладе дается анализ...  
 В настоящем докладе рассматриваются...  
 В настоящем докладе даются краткие замечания по поводу...  
 В настоящем докладе содержится...  
 В настоящем докладе дается описание...  
 В настоящем докладе обсуждается...  
 В настоящем докладе исследуется...  
 В настоящем докладе представлен...  
 В настоящем докладе сообщается о...  
 Настоящее исследование является попыткой...  
 Нам удалось показать, что...

#### Речевые обороты, используемые во вводной части доклада

As many of you know...	Как многим из вас известно...
First of all I would like to...	Прежде всего, я хотел бы...
First let me express my gratitude to...	Прежде всего, позвольте выразить мою благодарность...

I am sure I don't have to remind you that...	Я уверен, что мне не надо напоминать вам, что...
I am very pleased to have this opportunity to...	Я рад возможности...
In my paper I want to high-light...	В моем докладе я хочу осветить
In the introduction to my paper I would like to...	Во введении к моему докладу я хотел бы...
I tell this story because...	Я рассказываю эту историю, потому что...
I want to begin my presentation with...	Я хочу начать мое выступление с...
Let me begin with...	Позвольте мне начать с...
The first thing I want to talk about is...	Первое, о чем я хочу сказать это...

**Типичные речевые обороты, обеспечивающие логические связи и переходы внутри текста доклада**

According to this theory...	Согласно этой теории...
After this it remains only to say that...	После этого остается только сказать, что...
Again, I want to emphasize that...	Я еще раз хочу подчеркнуть, что...
Allow me to call your attention to...	Разрешите мне привлечь ваше внимание к...
An example or two will be enough to understand the importance of...	Одного-двух примеров будет достаточно, чтобы понять важность...
Apparently I was wrong when...	Очевидно, я был не прав, когда...
As a matter of fact, we should have in mind that...	Между прочим, нам следует иметь в виду, что...
As an example I can suggest...	В качестве примера я могу предложить...
As everybody here knows...	Как всем присутствующим здесь известно...
As far as I am concerned...	Что касается меня...
As far as I know...	Насколько мне известно...
As far as I understand...	Насколько я понимаю...
As I have already mentioned...	Как я уже упомянул...
As it appears to me...	Как мне представляется...

As shown in Fig. 1...	Как показано на рис. 1...
Assuming that...	Полагая, что...
Basically, we have the same results as...	В основном, у нас такие же результаты, как и у...
Broadly speaking, this method can be applied for...	Вообще говоря, этот метод может быть применен для...
By no means, I do not insist on...	Я ни в коем случае не настаиваю на...
But the fact is... that	Но дело в том, что...
By the way, it's worth recalling...	Между прочим, стоит вспомнить...
Clearly...	Очевидно...
Coming back to the main topic of my paper...	Возвращаясь к главному вопросу моего доклада...
Consequently, we will be able to use...	Следовательно, мы сможем использовать...
First... second... third...	Во-первых... во-вторых... в-третьих...
For example...	Например...
For the sake of...	Ради...
For this reason...	По этой причине...
Fortunately...	К счастью...
From this point of view...	С этой точки зрения...
Generally speaking...	Вообще говоря...
However, I will not agree with...	Однако, я не соглашусь с...
I agree there is a lot to be done to...	Я согласен, что многое предстоит сделать, чтобы...
I am afraid I have to repeat...	Боюсь, что я должен повторить...
I am fully conscious of the fact that...	Я полностью отдаю себе отчет в том, что...
I am convinced that...	Я убежден, что...
I am disposed to think that...	Я склонен думать, что...
I am far from asserting that...	Я далек от утверждения, что...
I am persuaded that...	Я убежден, что...
I am sorry to admit that...	К сожалению, я вынужден признать, что...
I am sorry to say that...	К сожалению, я должен сказать, что...
I am sure that...	Я уверен, что...
I am under the impression that...	У меня такое впечатление, что...

I am very far from thinking that...	Я далек от того, чтобы думать, что...
I ask you to consider...	Я прошу все рассмотреть (учесть)...
I attribute it to...	Я отношу это к...
I can hardly agree with...	Мне трудно согласиться с...
I cannot give a better example than...	Я не могу дать вам лучшего примера, чем...
If so, there is no way out but to...	Если это так, то нет другого выхода, кроме того, чтобы...
In addition to...	Дополнительно к...
In order to...	Для того, чтобы...
In particular...	В частности...
In spite of the fact that...	Несмотря на то, что...
In the first place...	Прежде всего...
In this case...	В этом случае...
In this connection...	В этой связи...
In this respect...	В этом отношении...
It appears that...	Представляется, что...
It is a well-known fact that...	Хорошо известно, что...
It is claimed that...	Утверждается, что...
It is doubtful that...	Есть основание сомневаться в том, что...
It is expected that...	Ожидается, что...
It is hoped that...	Есть надежда, что...
It is interesting that...	Интересно, что...
It is likely that...	Похоже, что...
It is not my intention to...	В мои намерения не входит...
It is recognized that...	Признано, что...
It is possible that...	Возможно, что...
It is useful to recall...	Полезно вспомнить, что...
It may seem strange that...	Может показаться странным, что...
It should be emphasized that...	Следует подчеркнуть, что...
It should be mentioned that...	Следует упомянуть, что...
It should be pointed out that...	Следует отметить, что...
It should be realized that...	Следует понимать, что...
Let me give an example of...	Позвольте мне дать пример...
Let me give you my explanation of...	Позвольте мне дать свое объяснение...

Let me now turn to...	Позвольте мне теперь обратиться к...
Let us consider what happens if...	Давайте посмотрим, что произойдет, если...
Let us have a closer look at...	Посмотрим повнимательнее на...
Let us imagine that...	Представим, что...
Let us suppose that...	Предположим, что...
Moreover...	Более того...
Namely...	А именно...
Nevertheless...	Тем не менее...
Now I come to...	Теперь я перехожу к...
On the contrary...	Наоборот...
On the one hand...	С одной стороны...
On the other hand...	С другой стороны...
Primarily...	В первую очередь...
That is...	То есть...
Therefore...	Поэтому...
This is indeed the case when...	Это как раз тот случай, когда...
This is in turn implies...	Это, в свою очередь, предполагает...
This is particularly true for...	Это особенно верно для...
Thus...	Таким образом...

**Типичные речевые обороты, используемые  
в заключительной части доклада**

As my time is running out...	Поскольку время истекает...
Before I close I would like to emphasize the importance of...	Прежде чем закончить, я хотел бы подчеркнуть важность...
Finally I want to say a word about...	Наконец, я хочу сказать немного о...
I close with the words...	Я заканчиваю словами...
I end as I began...	Я заканчиваю, как и начал...
I end this paper with the description of...	Я завершаю мой доклад описанием...
I leave it to you to judge...	Я представляю вам судить...
I'm afraid I'm taking too much of your time...	Боюсь, что отнимаю у вас слишком много времени...
In closing I want to mention very briefly...	В заключение я хочу очень кратко упомянуть...

In closing, let me briefly turn to...	Заканчивая, позвольте мне кратко остановиться на...
In conclusion, let me say...	В заключение разрешите мне сказать...
In conclusion may I repeat...	В заключение разрешите мне повторить...
I repeat once again...	Я снова повторяю...
Now I want to go back to my initial statement...	Сейчас я хочу возвратиться к моему первоначальному утверждению...
Now when I have completed my review...	Теперь, когда я закончил свой обзор...
Summing up all that has been said...	Суммируя все, что было сказано...
Summing up what I have said...	Суммируя все, что я сказал...
The last part of my talk will be devoted to...	Последняя часть моего сообщения будет посвящена...
To all this must be added that...	Ко всему этому следует добавить, что...

**Типичные речевые обороты и фразы,  
используемые председателями на научных дискуссиях**

Address the audience, please!	Говорите, пожалуйста!
Are there any questions for...?	Имеются вопросы к...?
Does that answer your question?	Вы удовлетворены этим ответом?
I give the floor to...	Предоставляю слово...
I am afraid your time is up.	Боюсь, ваше время истекло.
Are there any questions or comments on...?	Есть ли вопросы или замечания по поводу...?
I would like the speakers to be brief.	Я просил бы выступающих говорить кратко.
I would like to ask Dr. B. to comment on...	Я просил бы д-ра Б. прокомментировать...
I would like to open the discussion on the paper given by...	Я хотел бы открыть дискуссию по докладу, представленному...
I would like to summarize...	Я хотел бы подвести итог...
Let me just interrupt you a minute.	Позвольте мне прервать вас на минутку.
May I have your attention, please.	Прошу вашего внимания.

Next we will hear from...	Следующим будет выступать...
Speak from your place, please.	Пожалуйста, говорите со своего места.
Take the floor, please!	Говорите, пожалуйста!
Would you speak a little bit louder, please?	Вы не могли бы говорить громче?
Could the author tell us...	Не мог бы автор сказать нам...
Do you have other questions?	Имеются еще вопросы?
Have you done any studies on...	Вы проводили исследования...
I am interested to know if you agree with...	Меня интересует, согласны ли вы с...
I have a question about...	У меня вопрос о...
I have two brief questions.	У меня два коротких вопроса.
In relation to your question I'd like to point out that...	Что касается вашего вопроса, я хотел бы отметить, что...
It would be interesting to know...	Было бы интересно знать...
I would answer your questions as follows...	Я бы ответил на ваши вопросы следующим образом...
I would like to answer your question with...	Я хотел бы ответить на ваш вопрос...
I would like to ask you why...	Я хотел бы спросить вас, почему...
Let me ask a question concerning...	Позвольте мне задать вопрос, касающийся...
My next question relates to...	Мой следующий вопрос относится к...
One last question.	Последний вопрос.
One more question.	Еще один вопрос.
Perhaps Dr. X. could answer this question better?	Возможно, д-р X. Лучше ответит на этот вопрос?
Regarding that question on...	Что касается вопроса о...
The answer to the first question is...	Ответ на первый вопрос заключается в следующем...
My question is...	Мой вопрос заключается в следующем...
What can you tell about...	Что вы можете сказать о...
Would you mind explaining how...	Не могли бы вы объяснить как...

## СПИСОК ИСПОЛЬЗУЕМОЙ ЛИТЕРАТУРЫ

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## ОБУЧЕНИЕ УСТНОЙ И ПИСЬМЕННОЙ НАУЧНОЙ РЕЧИ

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