

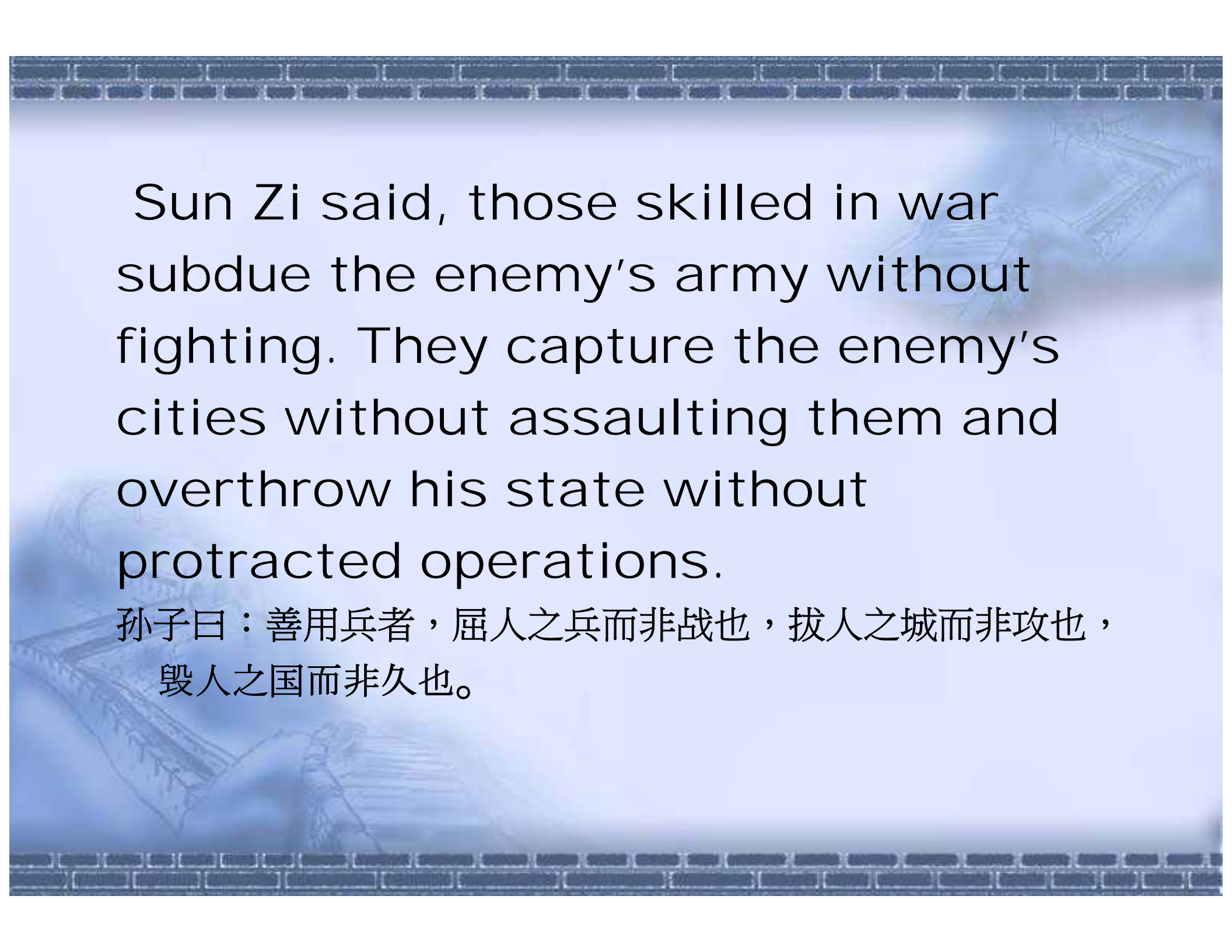


# INFORMATION AND NATIONAL SECURITY

信息能力与国家安全

**Ren Wang**

任望



Sun Zi said, those skilled in war subdue the enemy's army without fighting. They capture the enemy's cities without assaulting them and overthrow his state without protracted operations.

孙子曰：善用兵者，屈人之兵而非战也，拔人之城而非攻也，  
毁人之国而非久也。



## Department of Defense Strategy for Operating in Cyberspace

July 2011

In May 2011, *US International Strategy for Cyberspace* was launched by the Obama Administration. What is the intention?

2011年5月奥巴马政府出台了《美国网络空间国际战略》 意欲何为？





With the rise of global information revolution, the connotation and denotation of war are being extended. The most effective method emphasized by past strategists, e.g. the cruelest means, has become more hidden.

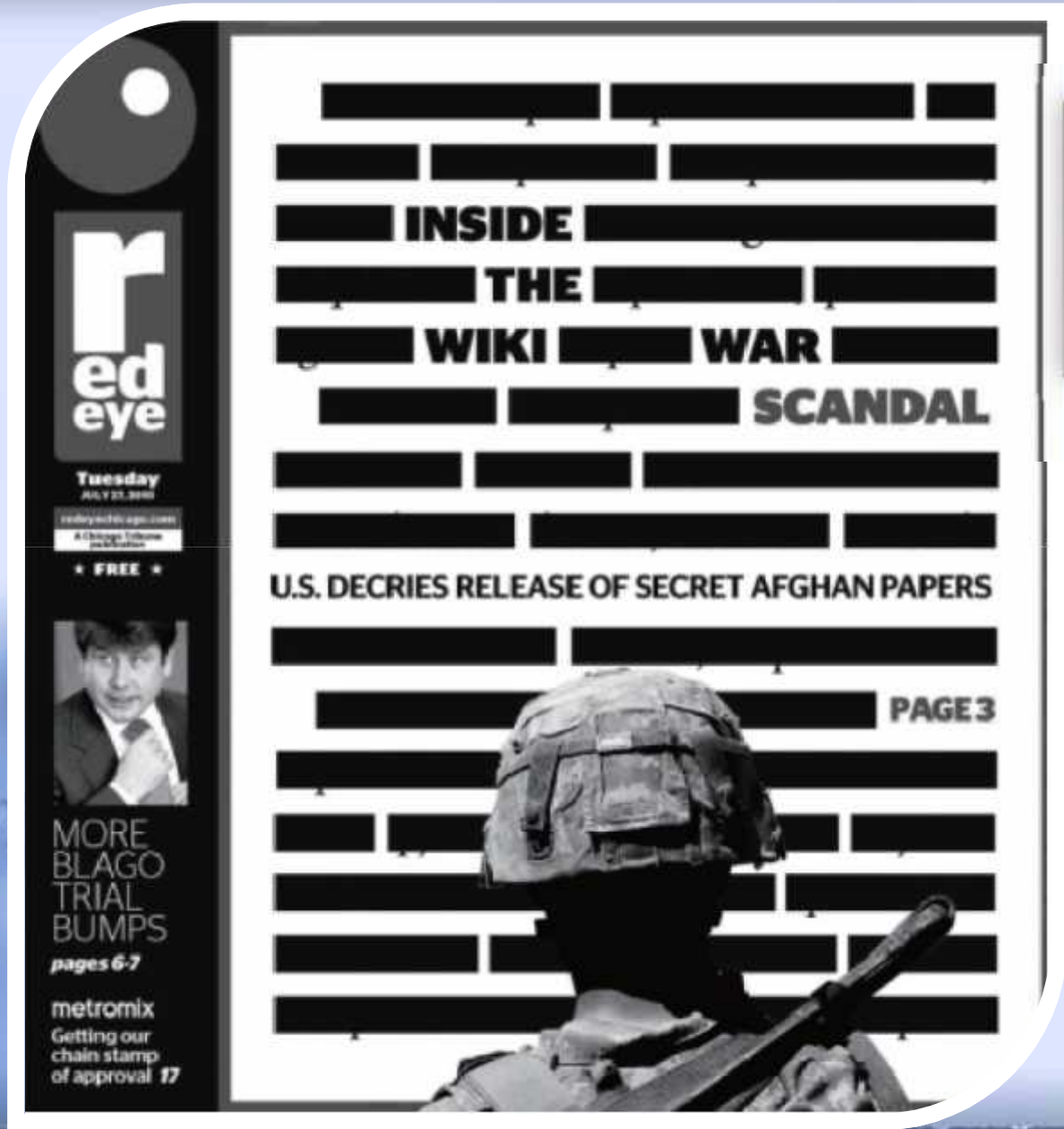
随着全球信息革命的兴起，使得战争的内涵和外延得到扩展，过去军事家所强调的战争最有效方法——“使用最残酷的手段”，变得更加隐蔽。



Google

Google Maps brings convenience to whom and endangers whose security?

Google地图，方便了谁，又动了谁的安全？



Is WIKI declassifying or leaking the secret?

WIKI到底是解密还是泄密？



It is thought-provoking that the internet promoted the development of the political turbulence in the Middle East and North Africa.

2012年中东、北非政局的动荡，互联网在其中推波助澜，引发人们深思



The “Prism” Incident deeply pierced the sensitive nerve of the cyberspace, triggering heated discussion on information security by the international community.

2013年6月“棱镜门”事件，深深刺痛了网络空间的敏感神经，引发了全球社会对信息安全的热烈讨论。







A cyber attack against JPMorgan Chase happened in 2014, 84 million customers information were revealed; and the cyber attack against Sony Pictures Entertainment caused 100 million dollars direct economic lost . The threat to cyberspace security is coming to everybody of us.



2014年摩根大通银行遭网络攻击，8400万客户信息泄露；SONY影业遭黑客攻击，直接经济损失1亿美元。网络空间的安全威胁已经来到每个人身边。

# Content 交流内容

**Information  
capability and  
national security**  
信息能力与国家安全

## **Definition and connotation**

概念和基本内涵

## **Influence of information capability on national security**

信息能力对国家安全的影响

## **How to strengthen national defense in cyberspace**

如何加强网络空间国防建设



# **I. Connotation of information capability**

## **一、信息能力的基本内涵**

# I. Connotation of information capability

## 一、信息能力基本内涵

### 1. Meaning of information capability

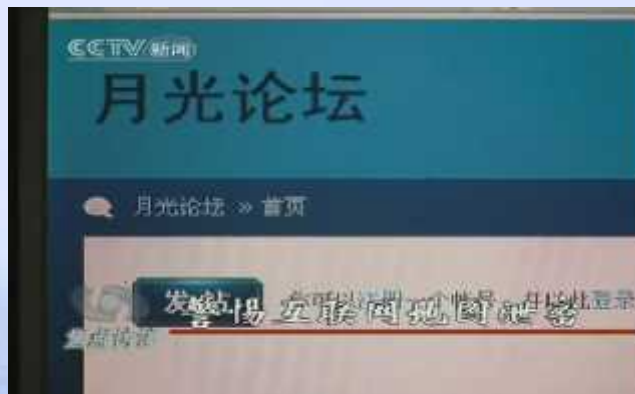
#### 1、信息能力的含义

Information capability means the capability of understanding and employing various information technologies, namely the capability to access to, analyze, process handle and transmit information.

The information acquisition by Wiki leaks, map information dissemination on moon-BBS, information analysis by online banking hackers, all these are manifestations of information capability and its harms to national security.

信息能力是对各种信息技术的理解和运用的能力，即对信息的获取、分析、加工、处理、传递能力。

——维基解密的信息获取、月光论坛的地图信息传递、网上银行大盗的信息分析，这些都是信息能力，而且都是信息能力在危害国家安全方面的体现。



# I. Connotation of information capability

## 一、信息能力的概念和基本内涵

**To achieve national security, a country must attach importance to the development of information capability, adopt correct view of national information capability, promote and safeguard national security by enhancing information capability and build concrete defense of national information security.** 一个国家要实现安全，就必须重视信息能力的建设，树立起正确的国家信息能力观念，用信息能力的提升促进和保障国家安全，构筑起国家信息安全防线。



The leaders of both countries attach great importance to safeguarding national security by improving information capability. But China almost has no discursive power in cyberspace since China has few independently developed information technologies and thus low information capability.

两国领导人同样重视用信息能力的提高来保障安全，但由于中国缺少自主可控的信息能力，于是在网络空间几乎没有话语权

# I. Connotation of information capability

## 一、信息能力基本内涵

### 2. Connotation of national information capability

#### 2、国家信息能力的内涵

It refers to the total information resources acquired by related institutions and citizens of a country as well as its capability to access to, transmit, utilize and control the information. The core is the **information innovation and materialization**. 是指一个国家拥有的信息资源数量及其机构，国民获取、传递、利用与控制信息的能力之和，其核心是信息创新和信息物化。



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Stuxnet virus





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项目介绍

国家安全局一份简短的幻灯片里，高度评价了该项目的效率，并列举了所有参与公司的LOGO

项目被称为被截获计划，因为被截获的分光，被用于光纤中的信息传播

The program is called PRISM, after the program used to spy in light, which is used to carry information on fiber-optic cables.

报告还披露该项目是美国国家安全局最主要的网络情报来源

This role indicates that the program is the number one source of raw intelligence used for NSA analysis reports.

有送行动组的徽章。这是美国国家安全局颁发给提供美国合作公司的。

The seal of Special Source Operations, the NSAs term for alliances with trusted U.S. companies.

TOP SECRET//SI//ORCON//NOFORN

Hotmail Google skype AOL Yahoo! Facebook

PRISM

PRISM/US-984XN

Overview

OR

The SIGAD Used Most in NSA Reporting

Overview

April 2013

Delivered From: NSAC/CSBA 1-02  
Civnet 208/70198  
Dedusally Orc 20380901

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TOP SECRET//SI//ORCON//NOFORN

Hotmail Google skype Yahoo! AOL mail

SPECIAL SOURCE OPERATIONS

(TS//SI//NF) Introduction

U.S. as World's Telecommunications Backbone

PRISM

- Much of the world's communications flow through the U.S.
- A target's phone call, e-mail or chat will take the **cheapest** path, **not the physically most direct** path – you can't always predict the path.
- Your target's communications could easily be flowing into and through the U.S.

International Internet Regional Bandwidth Capacity in 2011

Source: TeleGeography Research

TOP SECRET//SI//ORCON//NOFORN



## **II. The influence of information capability on national security**

### **二、信息能力对国家安全的影响**

## II. The influence of information capability on national security

### 二、信息能力对国家安全的影响

National information capability is based on the comprehensive national strength and it can also promote and secure national stability and prosperity.

国家信息能力依托于强大的综合国力，同时也促进和保障着国家繁荣稳定。



## II. The influence of information capability on national security

### 二、信息能力对国家安全的影响

Countries around world continually set up internet security leading organs at national level, and attached great importance on cyberspace security in information era.

世界各国纷纷成立国家层面的网络安全领导机构，重视信息化时代的网络空间安全。

**中央网络安全和信息化领导小组**

**时间** 2014年2月27日,中央网络安全和信息化领导小组召开第一次会议。

**组长**  习近平

**副组长**  李克强  刘云山

**功能定位** 统筹协调各个领域的网络安全和信息化重大问题,制定实施国家网络安全和信息化发展战略、宏观规划和重大政策,不断增强安全保障能力。

## II. The influence of information capability on national security

### 二、信息能力对国家安全的影响

The weight of information capability in the comprehensive national strength is ever increasing 信息能力在国家综合能力中所占的比重越来越高

A country and even the world is increasingly dependent on informatzation, therefore the national security will be severely threatened once the network/cyber and information security can not be guaranteed.

一个国家甚至全球对信息化的依赖程度略来越强，同时也形成了一旦无法保证网络和信息安全就会严重威胁国家安全的新情况。



## II. The influence of information capability on national security

### 二、信息能力对国家安全的影响



On July 23, 2011, the Yong-Wen Railway accident killed 40 (including 3 foreigners) and injured 200. The breakdown in information system was an important cause.

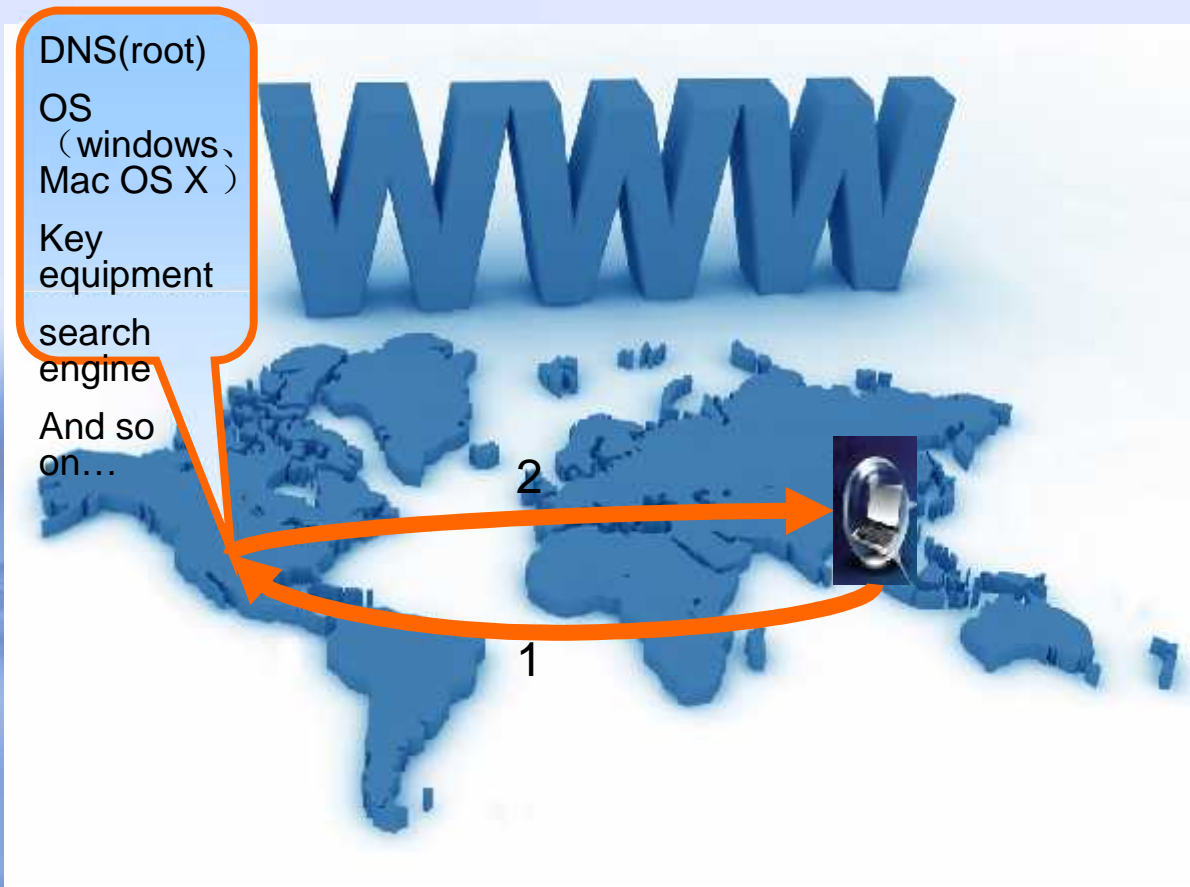
2011年7月23日，中国甬温铁路特大交通事故，造成40人（包括3名外籍人士）死亡，约200人受伤。信息系统故障是本次事故的一个重要因素。

# II. The influence of information capability on national security

## 二、信息能力对国家安全的影响

It is extremely dangerous to be highly dependent on informatization and put everything on the internet.

对信息化的高度依赖，什么东西都挂在网上，危险性是相当大的



## II. The influence of information capability on national security

### 二、信息能力对国家安全的影响

Comparison of cyber and information warfare with nuclear warfare

网络和信息战争与核战争比较



Nuclear warfare is a concept for deterrence and generally speaking it will not break out. In contrast, cyber warfare may be more harmful since we are using the network every day and cyber warfare may break out at any time while we are not aware of it.

核战争是一个威慑的概念，它一般不会发生。网络战与核战争相比，它的危害性更大，网络每天都在用，网络战随时都有可能发生，而你还浑然不知。



## II. The influence of information capability on national security

### 二、信息能力对国家安全的影响

The true feature of cyber war——‘Cyber Storm’ exercise by the US

网络战的真实面目——美国“网络风暴”军事演练



This is the cyber or information warfare. So when we are deeply impressed by the convenience of information technology, please never forget war is always a nightmare that brings the greatest suffering to the human beings.

这就是网络信息战争，当“信息化”还带给我们以美好印象的时候，请别忘了“战争”永远是给人类造成最大伤痛的梦魇。

## II. The influence of information capability on national security

### 二、信息能力对国家安全的影响

In information era, national security hot issues have a close relation with cyberspace, and bring about new situation, new issues, new characteristics and new trends.



信息时代，网络空间是国家安全热点问题的汇聚核心，新情况、新问题、新特点、新趋势大多诞生于此

1, Because of the demonstration effect of cyber power, “cyber forces” construction leads the transformation of war pattern and poses a new threat to military security.

1、在网络强国的示范效用下，“网军”建设引领战争形态转变，催生了军事安全的新威胁。

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2, “Color Revolution” incites subversion of state power by using one stroke, replaces previous peaceful evolution which need long-term strength building, and bring force to a new test of political security.

2、“颜色革命”以瞬间发力颠覆国家政权，取代了长时蓄力和平演变，催生了政治安全的新考验。

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3, Social contradiction caused by internet affairs are intensified and magnified and bring force to a new focus of social security.

3、网络事件引发的社会矛盾激化放大，催生了社会安全的新焦点。

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神一样的翻译：APEC = Air Pollution  
Eventually Controlled 空气污染得到了控制 🤗🤗☀️☀️☕☕ 听说又多了两种颜色：贱民灰和APEC蓝 🤗🤗🤗

新词APEC blue 形容短暂易逝，不真实的美好。例句：He is not really into you, it's an APEC blue!

相应的 Beijing smog：形容挥之不去如影随形的坚守和专一，例句：He is so into u. It's like a Beijing smog on a Dec Saturday.

信息时代，网络空间是国家安全热点问题的汇聚核心，新情况、新问题、新特点、新趋势大多诞生于此

4, The confrontation and interpenetration during the internet cultural exchange intensify the strategic competition of cultural power between different countries, and bring force to a new topic of cultural security

4、网络文化交流交融中的正面交锋、渗透交互、隐性交织加剧了国家文化力的战略竞争，催生了文化安全的新命题。

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5, Internet technology has a close relation with global high technology development and innovation, and bring force to a new game of technical security.

5、网络技术汇聚全球高新技术创新发展，催生了科技安全的新博弈。



**III. How to strengthen national  
information capability construction**  
三、如何加强国家信息能力建设

### III. How to strengthen national information capability construction

### 三、如何加强国家信息能力建设



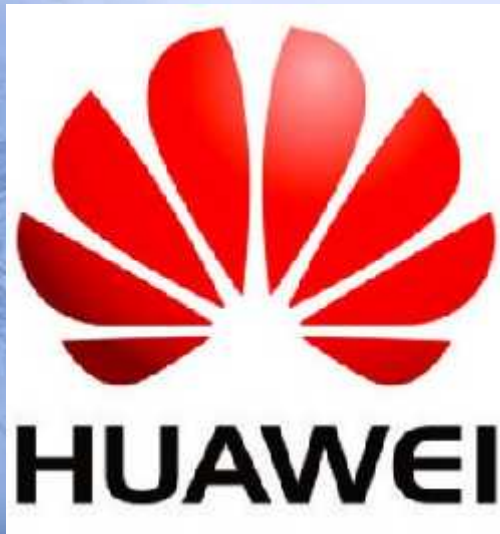


### III. How to strengthen national information capability construction

#### 三、如何加强国家信息能力建设

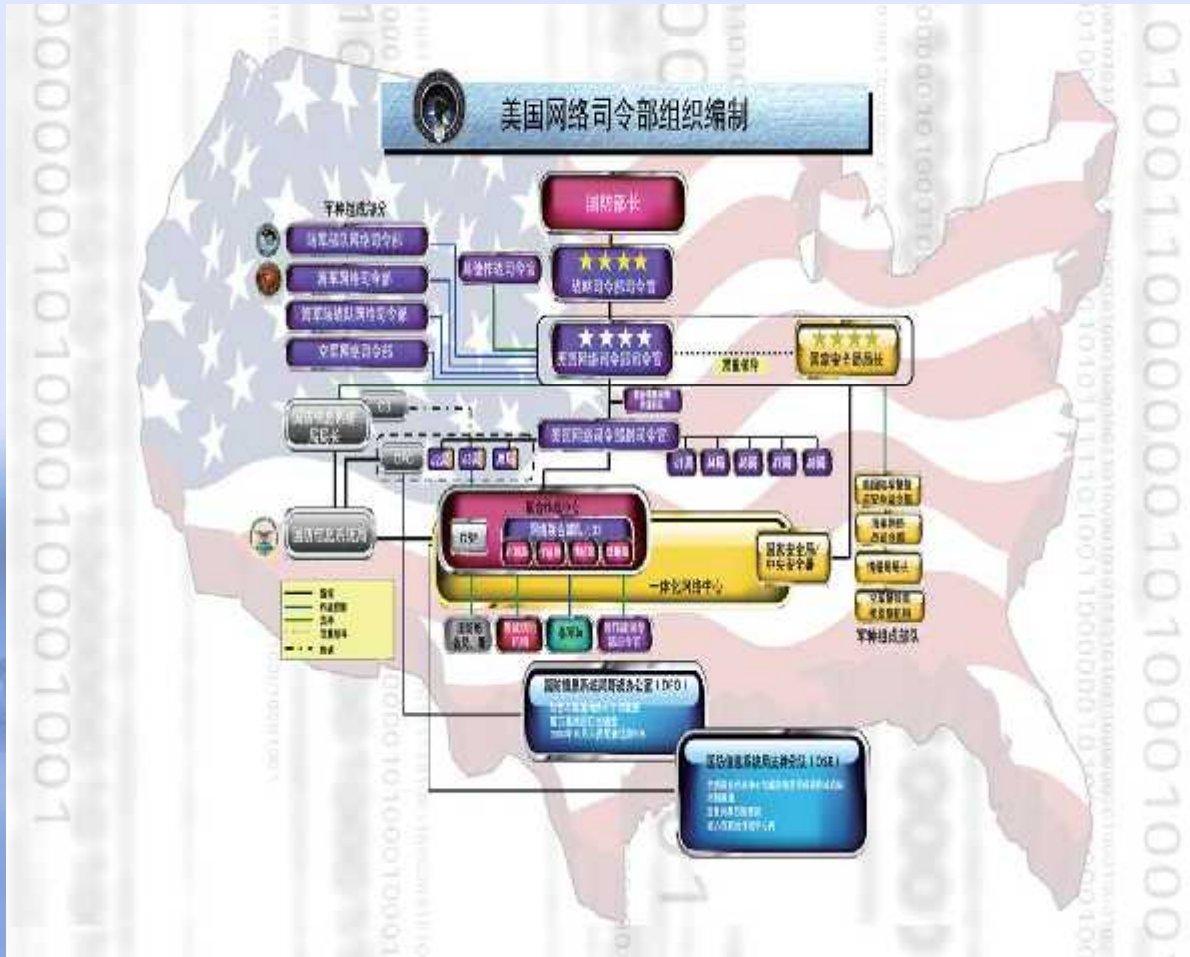


- 1, To break the worldwide monopoly and advance informationization application by independent development.
- 1、在全世界范围，打破传统垄断，积极推进自主可控的信息化建设



# III. How to strengthen national information capability construction

## 三、如何加强国家信息能力建设



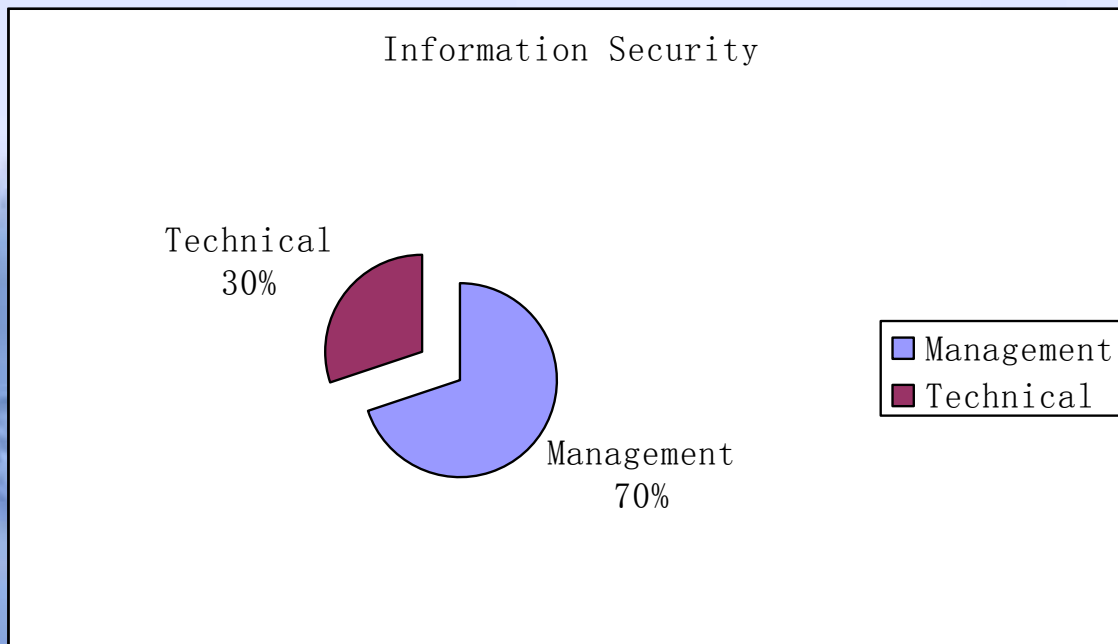
- 2, To formulate the overall strategy and upper-level design of cyberspace
- 2、要确立网络空间的总体战略和顶层设计

# III. How to strengthen national information capability construction

## 三、如何加强国家信息能力建设

3, “30% technology and 70% management” is an important basic idea in the field of information security.

3、 “三分技术，七分管管理” 是信息安全领域的一个重要基本思想



Management is the most effective means when technology is still under other countries' control. 在无法改变技术受制于人的条件下，管理是最有效的方式

Information security management is broad in scope, including strategy, organization, personnel, development and purchasing. 信息安全管理范畴是广义的，包含有策略、组织、人员、开发采购等都方面内容

可参考：ISO/IEC27001、27002

# III. How to strengthen national information capability construction

## 三、如何加强国家信息能力建设

### 4, Set up information security international exchange mechanism

#### 4、建立信息安全国际交流机制



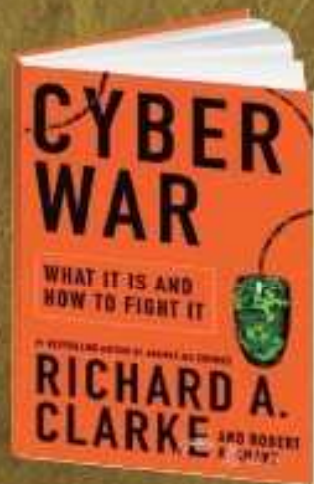
- 1, open and interconnectivity
- 2, govern cyberspace by rule of law
- 3, mutual respect and trust
- 4, strengthen exchange and communication

- 一是要立足开放互联
- 二是要依法治网
- 三是要相互尊重和信任
- 四是要加强交流和沟通



**We should share experience, and reinforce to each other in cyberspace, particularly, we should enhance cooperation on countering cyberterrorism, and jointly establish a peaceful, secure, open and cooperative cyberspace.**

我们应在网络空间共享经验、取长补短，应特别加强打击网络恐怖主义的犯罪合作，共同联手应对，共同构建一个和平、安全、开放、合作的一个网络空间。



### 《CYBER WAR (网络战争)》

2010年6月，借着全球掀起的网络战热潮，有一本书在美国热销。这就是美国五角大楼前助理、哈佛肯尼迪学院教授理查德-克拉克 (Richard A. Clarke) 与人合著的《网络战——对国家安全的下一个威胁及应对措施》(Cyber War)。作者长期从事网络安全国家战略的理论研究，从里根到克林顿任总统期间，他一直担任美国白宫网络安全顾问。

在本书中，作者用以色列对叙利亚、美国对伊拉克的战例，说明网络战有两种模式。一是用黑客技术摧毁敌人计算机防御体系，再用传统武器解决战斗。二是用宣传战瓦解敌人斗志。因此，网络战是真实的，是迅速的（以光速进行），是波及全球的，是超越战场的。而且，网络战已经打响了。同时，作者在书中也提出一些带有极浓个人色彩的较为偏激的观点，例如“美国网战实力脆弱论”等。



Thank You !

谢谢 !