# Presentation by Twitter

Student works in the course given by
Akira Imada
(Brest State Technical University)

Last modified on 19 March 2016

**Akira Imada** @BSTU_AI 4m

Now we are going to use this Twitter in order to learn how to present your idea to others efficiently! ... #ohp

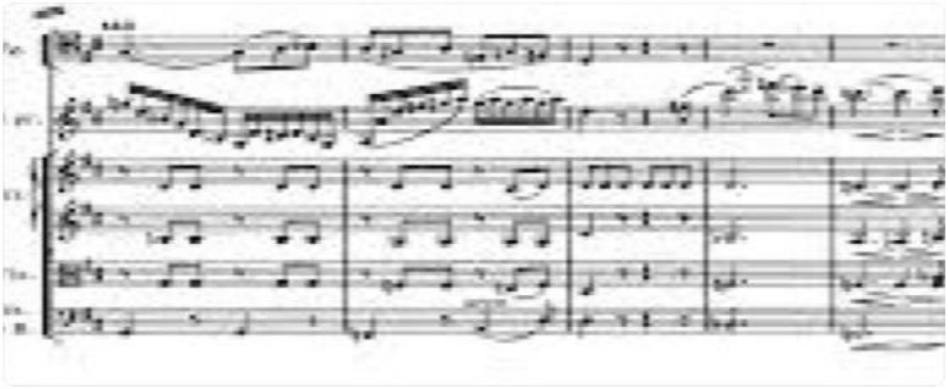
# Articulation & Pause

Akira Imada


Akira Imada @BSTU_AI 16m
These two are so important in performing symphonies! ... #ohp

**Akira Imada** @BSTU_AI 5m

As you see in an orchestra score! ...
#ohp




Akira Imada @BSTU_AI 10m
Not only in symphony, but also in many aspects in our life! ... #ohp

**Akira Imada** @BSTU_AI 7m

Herbert von Karajan became an authority, particularly because of an excellency of these two! ... #ohp

1

# I

# 1.

# Motivation & Stress Resistance

FirstOfShadow ClubEater


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
1. There are the key concepts in becoming a professional athlete. #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
2. You cannot achieve your goals without constant work. #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
3. This factors are very important in different fields of our life. #ohp
1

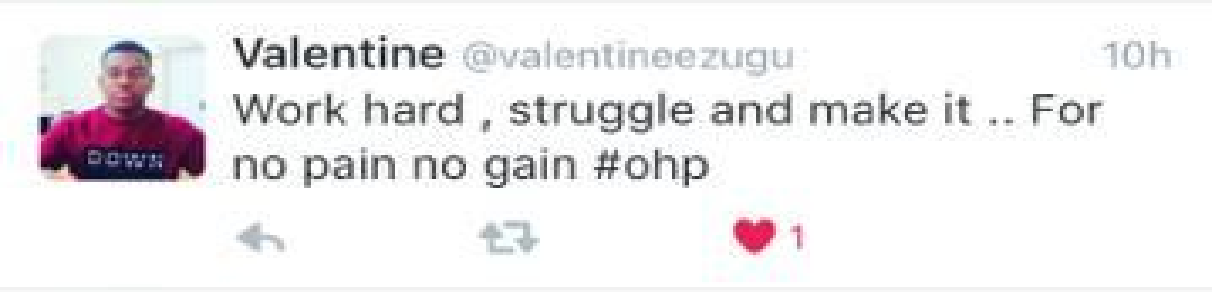

KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
4. Darya Domracheva is a three times champion of the Olympics. She reached maximal motivation. #ohp
2

# 2.

# No Pain No Gain

Valentine


Valentine @valentineezugu 11h
No pain no gain #ohp #ohp
1


Valentine @valentineezugu 10h
Work hard , struggle and make it .. For no pain no gain #ohp
1


Valentine @valentineezugu 10h
Like diamonds we must take pain as part of life .. Just as life , without death has no meaning .#ohp
1


Valentine @valentineezugu 10h
#ohp diamond undergoes so much pressure under rocks for thousands of year . That's why it shines
1


Valentine @valentineezugu 10h
Understanding what pain is .. Goes a long way in helping you become successful ...#ohp
1

# 3.

# Video Game

Andrei Begel


Andrei Begel @AndreiBehel 5h
The history of video games began earlier than most people think. #ohp
FLOOR 9
SCORE 296700
LIVES 9
HEALTH 100%
AMMO 99
1


Andrei Begel @AndreiBehel 5h
Pong, released in 1972, is the first arcade video game, which helped to establish the video game industry. #ohp
1


Andrei Begel @AndreiBehel 23h
Now video game systems are being used not only for entertainment, but also for rehabilitation. #ohp
1


Andrei Begel @AndreiBehel 23h
Video games have become an integral part of our culture. #ohp
BLIZZ CON
ANAHEIM CONVENTION CENTER
1

# II

# 1.

# Books through the Ages

FirstOfShadow ClubEater


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 2d
1. Books follow humankind for centuries.
#ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 2d
2. Books were very expensive. They were stored and were rewritten in the monasteries. #ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 2d
3. Number of books increase rapidly with the invention of the printing press. #ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 2d
4. Knowledge and ideas started to spread very fast. #ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 2d
5. Books and ideas were destroyed at some periods of the history. #ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 5d
6. Books changes with time, but their purpose remains unchanged. #ohp
2

# 2.

# What is Virtual Reality?

Andrei Begel


Andrei Begel @AndreiBehel 19h
1. The earliest attempt at virtual reality is surely the panoramic paintings from the 19th century. #ohp
1


Andrei Begel @AndreiBehel 19h
2. In 1838 Charles Wheatstone found out that the brain processes the 2D images from each eye into a 3D object. #ohp
1


Andrei Begel @AndreiBehel 19h
3. Advent of electronics and computer technology provoked meaningful VR progress in the 20th century. #ohp
1


Andrei Begel @AndreiBehel 19h
4. 2016 is a key year in the virtual reality industry. #ohp
1

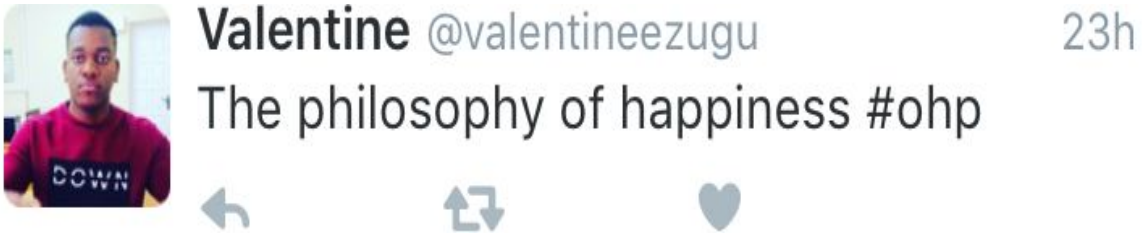

Andrei Begel @AndreiBehel 19h
5. The Matrix has a major cultural impact and brought the topic of simulated reality into the mainstream. #ohp
1

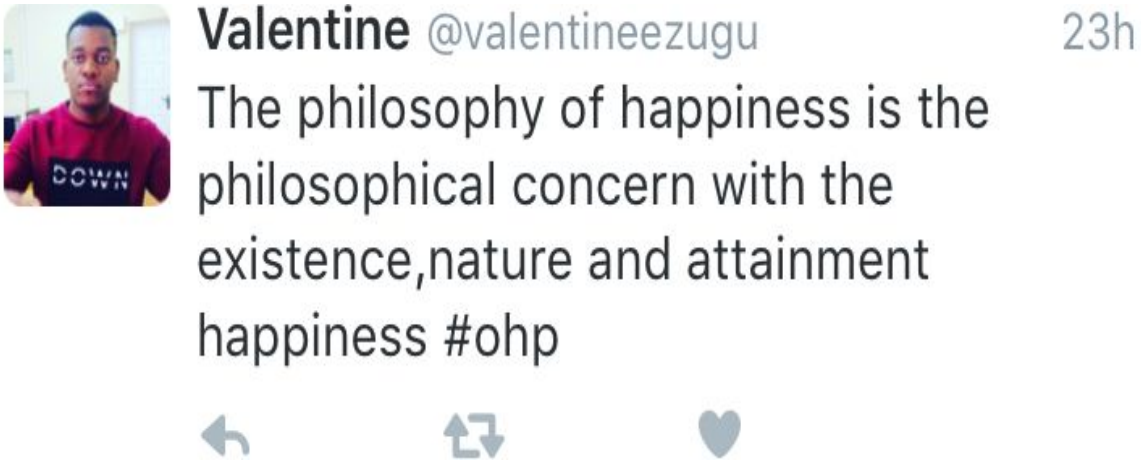

Andrei Begel @AndreiBehel 19h
6. Virtual reality is about to change the world. #ohp
1

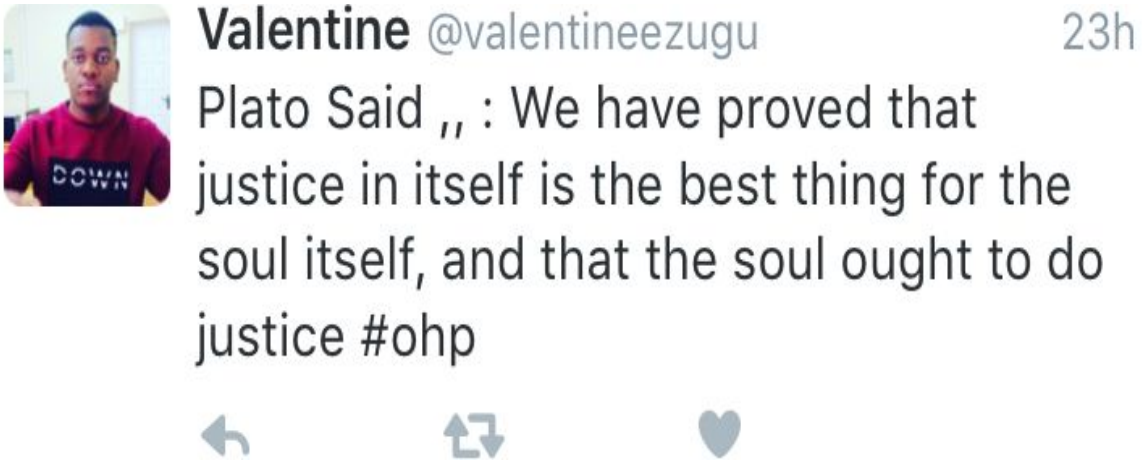
# 3.

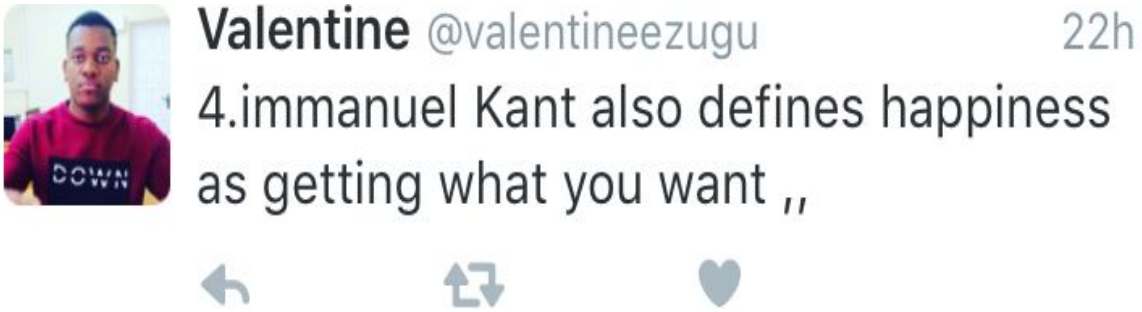
# The Philosophy of Happiness

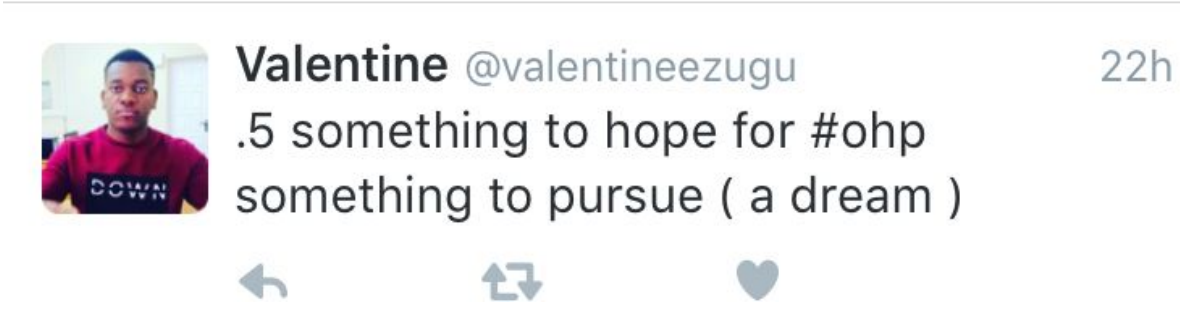
Valentine

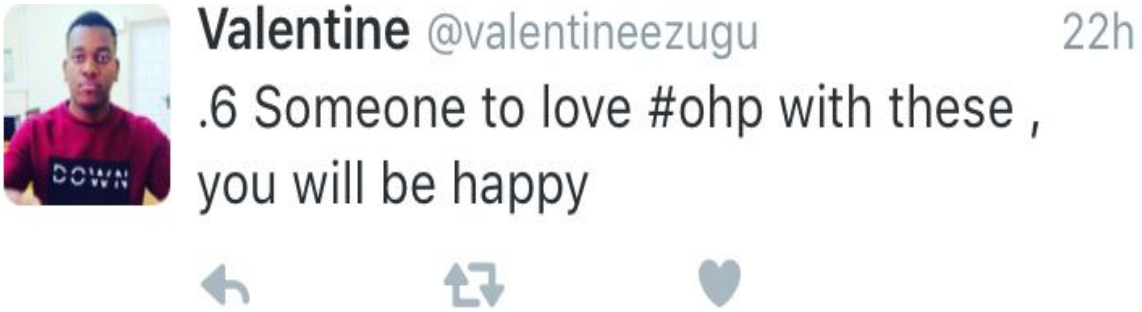


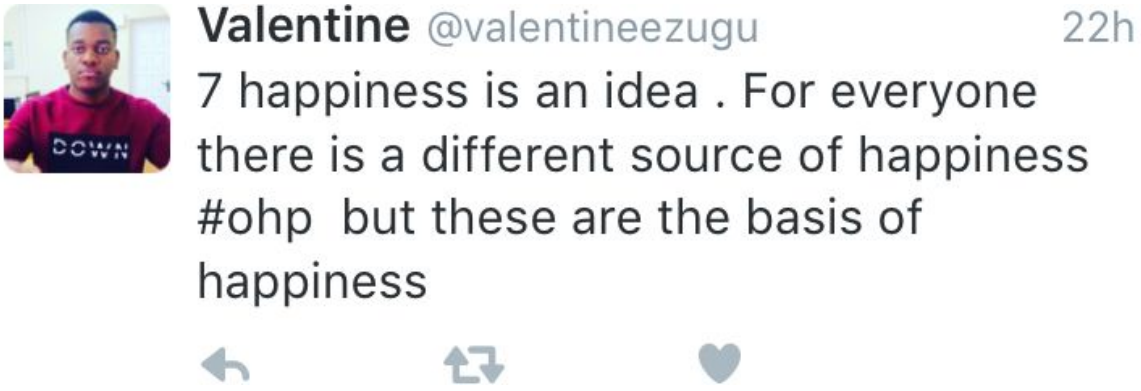

Valentine @valentineezugu 23h
The philosophy of happiness is the philosophical concern with the existence,nature and attainment happiness #ohp


Valentine @valentineezugu 23h
Plato Said ,, : We have proved that justice in itself is the best thing for the soul itself, and that the soul ought to do justice #ohp


Valentine @valentineezugu 22h
4.immanuel Kant also defines happiness as getting what you want ,,


Valentine @valentineezugu 22h
.5 something to hope for #ohp
something to pursue ( a dream )

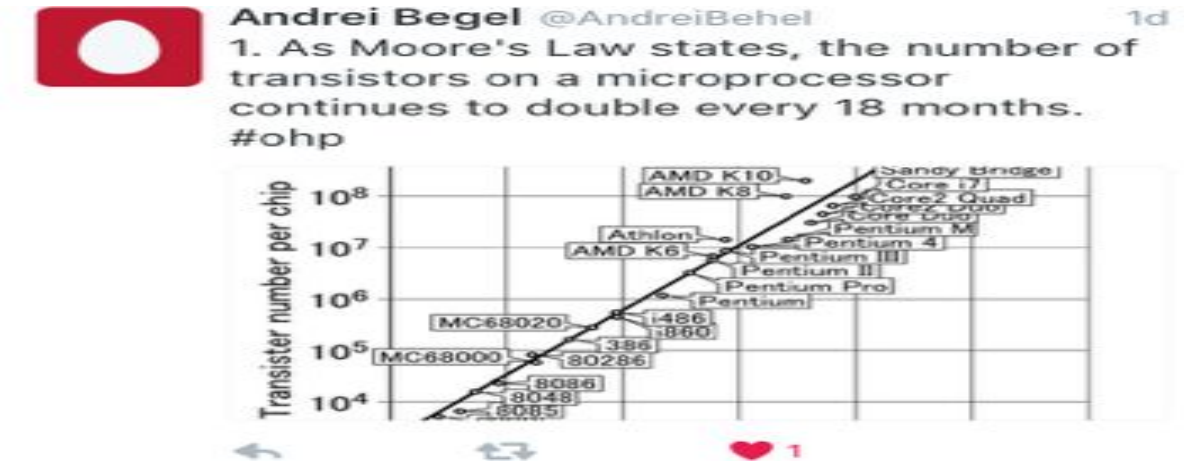

Valentine @valentineezugu 22h
.6 Someone to love #ohp with these ,
you will be happy

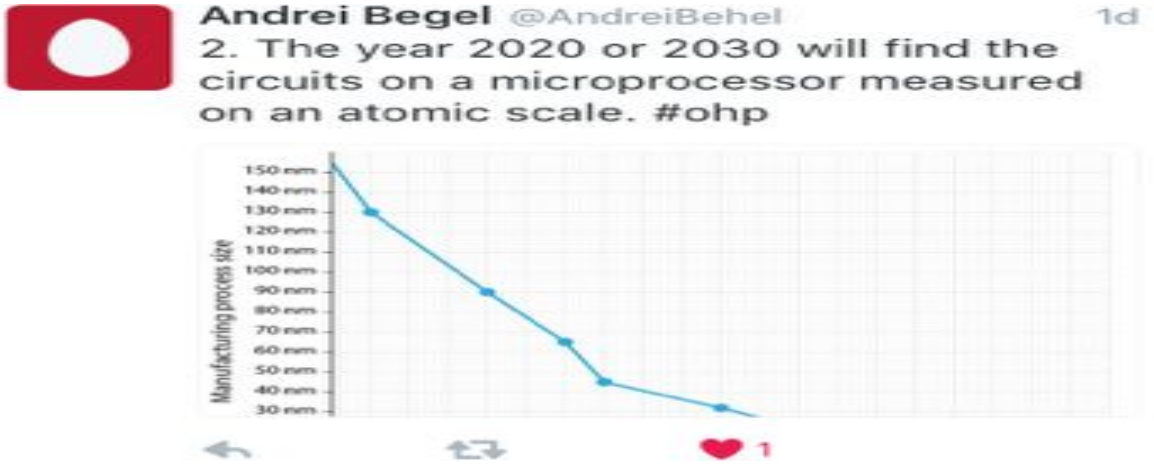

Valentine @valentineezugu 22h
7 happiness is an idea . For everyone there is a different source of happiness #ohp but these are the basis of happiness

# III

# 1.


Andrei Begel @AndreiBehel 1d
0. What Is the Future of Computers?
#ohp
1


Andrei Begel @AndreiBehel 1d
1. As Moore's Law states, the number of transistors on a microprocessor continues to double every 18 months.
#ohp
Transister number per chip
10^8
10^7
10^6
10^5
10^4
AMD K10
AMD K8
Sandy Bridge
Core i7
Core2 Quad
Core2 Duo
Core Duo
Pentium M
Pentium 4
Athlon
AMD K6
Pentium III
Pentium II
Pentium Pro
Pentium
MC68020
i486
i860
386
MC68000
80286
8086
8048
8085
1

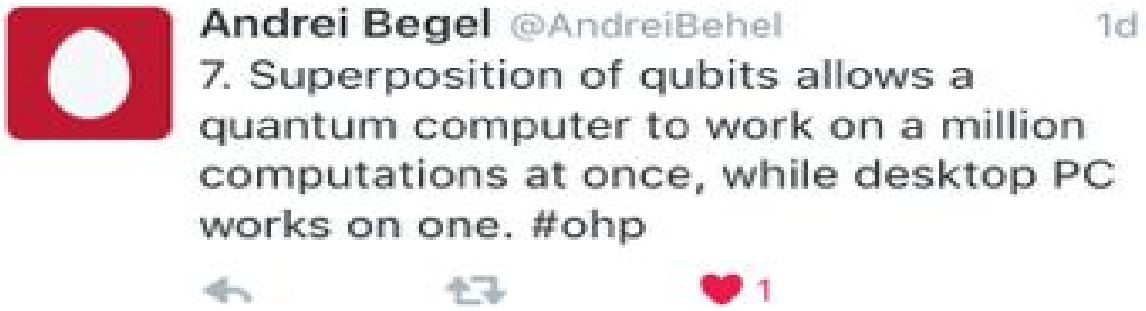

Andrei Begel @AndreiBehel 1d
2. The year 2020 or 2030 will find the circuits on a microprocessor measured on an atomic scale. #ohp
Manufacturing process size
150 nm
140 nm
130 nm
120 nm
110 nm
100 nm
90 nm
80 nm
70 nm
60 nm
50 nm
40 nm
30 nm
1

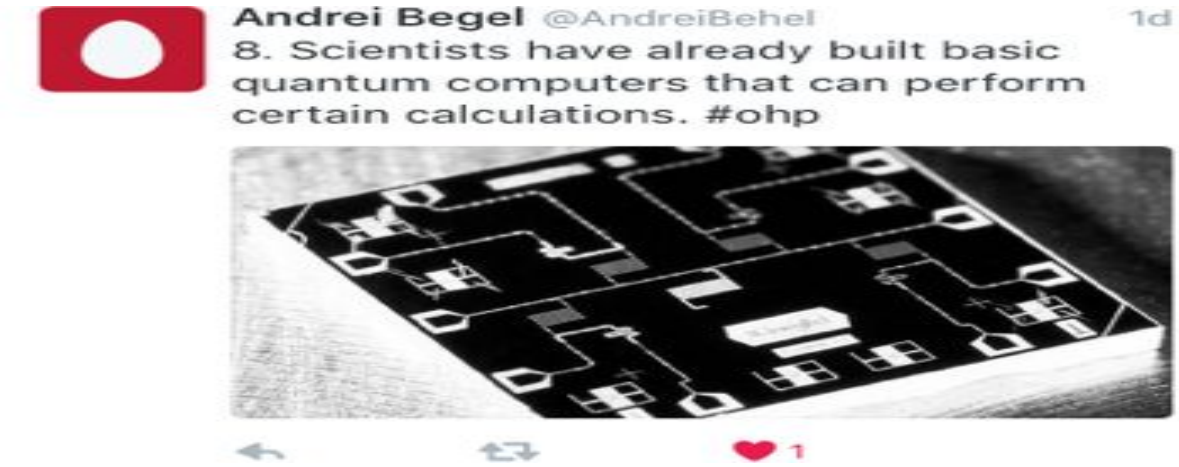

Andrei Begel @AndreiBehel 1d
3. The logical next step will be to create quantum computers. #ohp
QUANTUM COMPUTER
1


Andrei Begel @AndreiBehel 1d
4. Quantum computing was first theorized 35 years ago, by a physicist at the Argonne National Laboratory. #ohp
1

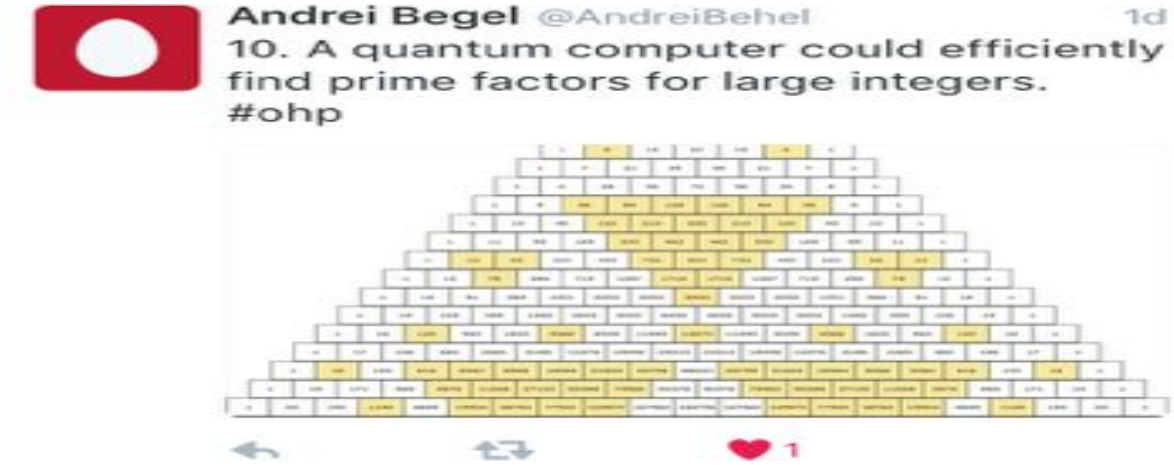

Andrei Begel @AndreiBehel 1d
5. Today's computers work by manipulating bits that exist in one of two states: a 0 or a 1. #ohp
1


Andrei Begel @AndreiBehel 1d
6. Quantum computers aren't limited to two states; they encode information as quantum bits, or qubits. #ohp
al register
Quantum re
101
000 001 010
100 101 110
1


Andrei Begel @AndreiBehel 1d
7. Superposition of qubits allows a quantum computer to work on a million computations at once, while desktop PC works on one. #ohp
1


Andrei Begel @AndreiBehel 1d
8. Scientists have already built basic quantum computers that can perform certain calculations. #ohp
1


Andrei Begel @AndreiBehel 1d
9. At a NASA lab in Silicon Valley, Google is testing a D-Wave quantum computer. #ohp
D-WAVE
D-WAVE
1


Andrei Begel @AndreiBehel 1d
10. A quantum computer could efficiently find prime factors for large integers.
#ohp
1


Andrei Begel @AndreiBehel 1d
11. This ability would allow a quantum computer to decrypt many of the cryptographic systems in use today.
#ohp
1


Andrei Begel @AndreiBehel 1d
12. Quantum computing is still in early stages of development. But quantum computers will replace silicon chips in the future. #ohp
1

# 2.


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
0. Will the levitation become commonly used? #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
1. Levitation is the process by which an object is held aloft, without mechanical support, in a stable position.#ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
2. It seemed to be fantastical 20 years ago. #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
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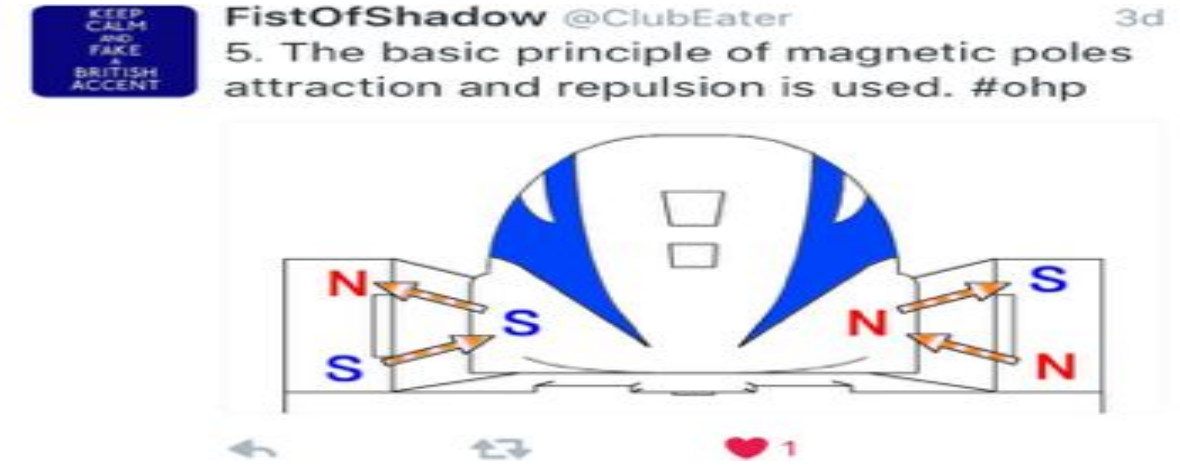
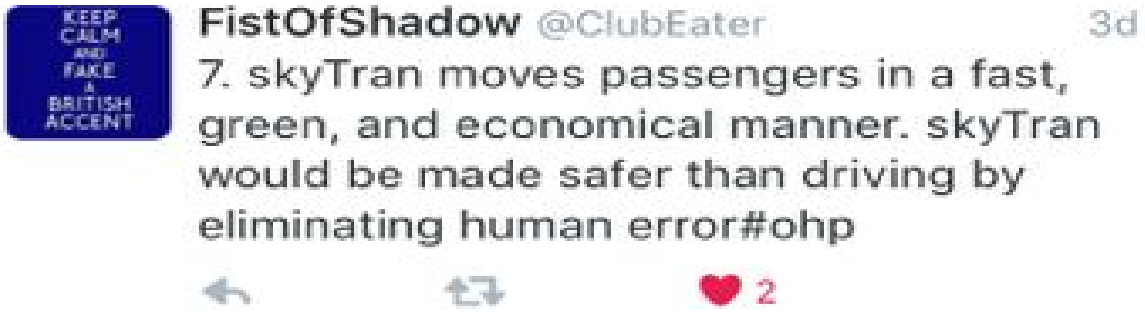
2. But today it's a reality. #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
3. A cubical magnet levitating over a superconducting material (known as the Meissner effect) #ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
4. Magnetical levitation is already actively used in transport systems of Japan, Germany, South Korea, China.#ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
5. The basic principle of magnetic poles attraction and repulsion is used. #ohp
N
S
S
N
S
N
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
7. skyTran moves passengers in a fast, green, and economical manner. skyTran would be made safer than driving by eliminating human error#ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
8. That's how the magic of levitation is becoming a reality nowadays. #ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
9. JR-Maglev MLX01 is the current Guiness record holder for train speed with the record of 603 km/h. #ohp
3
1

# IV

# 1.


Valentine @valentineezugu
7h
0. Is artificial intelligence safe ? #ohp
1
3


Valentine @valentineezugu 6h
1. Bill gates argues the possibility of
robots taken over the human race #ohp


Valentine @valentineezugu 6h
2. Scientists have created a device that can take the electronic signals in our brain and record them#ohp
1

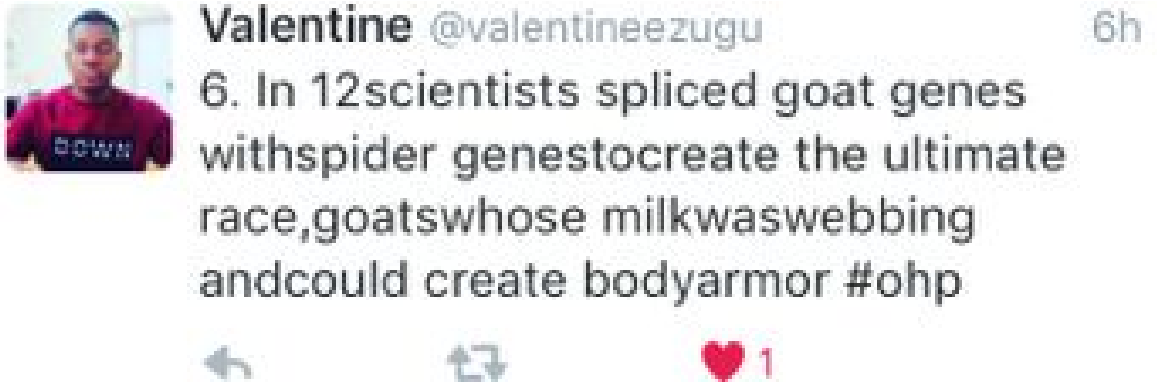

Valentine @valentineezugu 6h
3. Scientists at the University of Central Florida have made huge strides in creating real invisibility. #ohp
1

**Valentine** @valentineezugu 6h

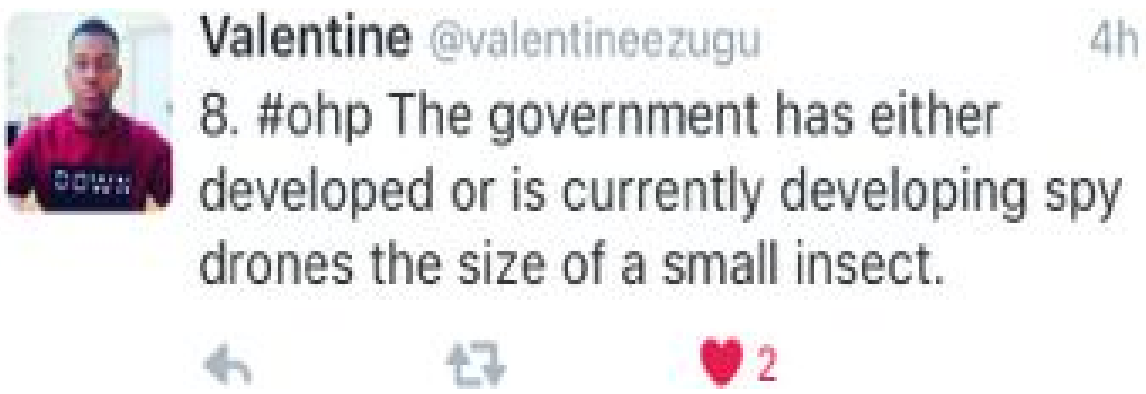
4.An amoral manufacturing company, has expressed interest in funding the research now that invisibility is becoming a likelihood. #ohp

1


Valentine @valentineezugu 6h
5. driver-less cars are in the U.K.And are getting very popular,mistakes in program installation can be deadly#ohp
1


Valentine @valentineezugu 6h
6. In 12scientists spliced goat genes withspider genestocreate the ultimate race,goatswhose milkwaswebbing andcould create bodyarmor #ohp
1


Valentine @valentineezugu
4h
7. #ohp insect spy drones
2


Valentine @valentineezugu 4h
8. #ohp The government has either developed or is currently developing spy drones the size of a small insect.
2

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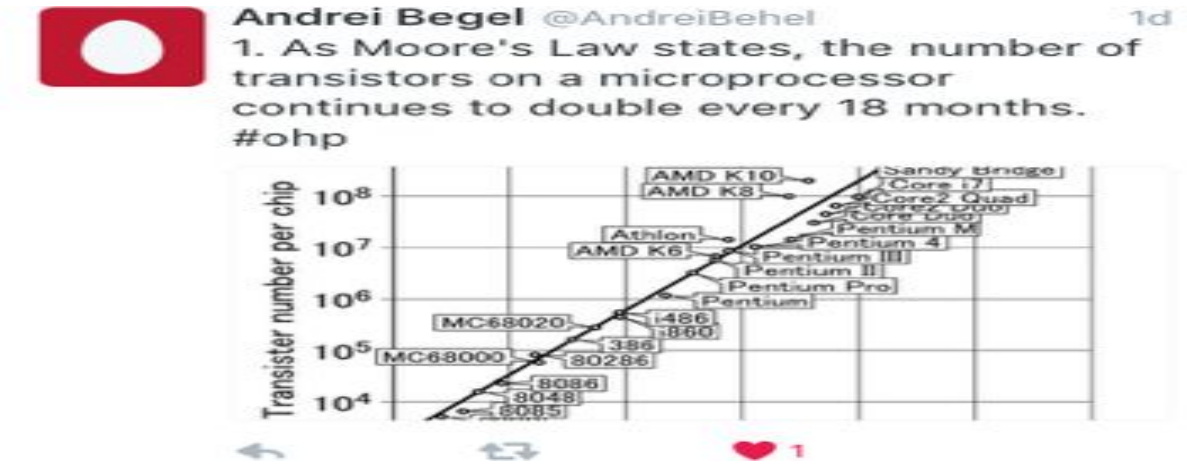
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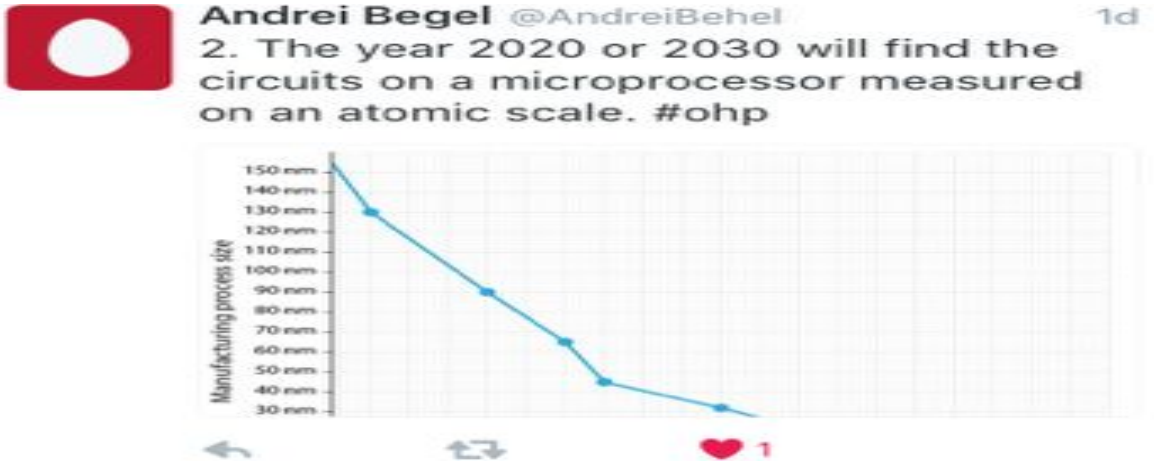
Core Duo
Pentium M
Pentium 4
Athlon
AMD K6
Pentium III
Pentium II
Pentium Pro
Pentium
MC68020
i486
i860
386
MC68000
80286
8086
8048
8085
1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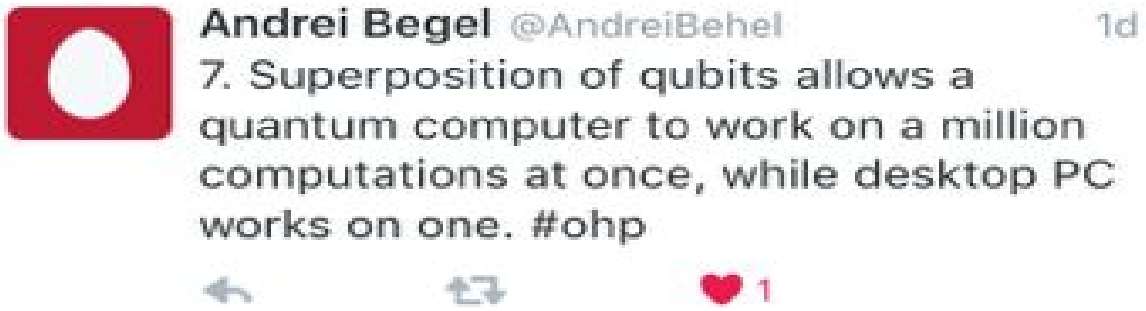
Quantum r
101
000 001 010
100 101 110
1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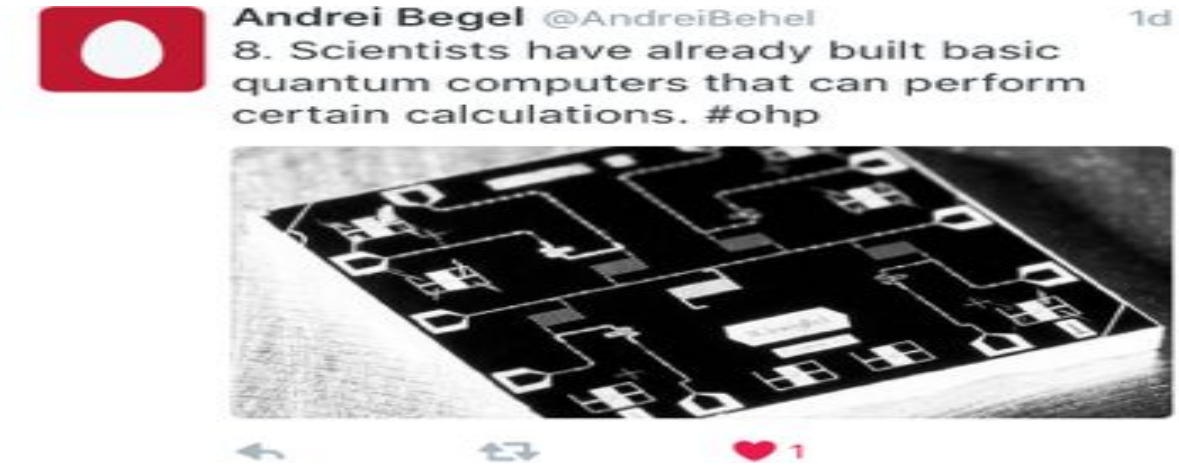
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D-WAVE
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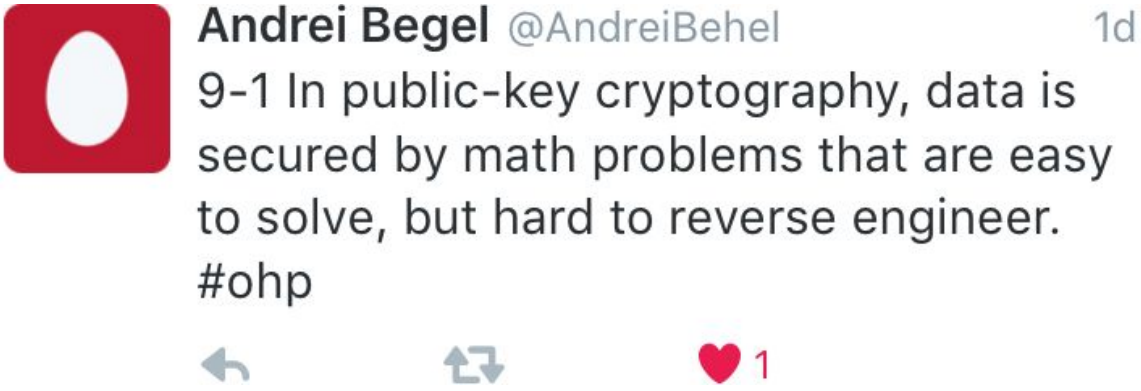
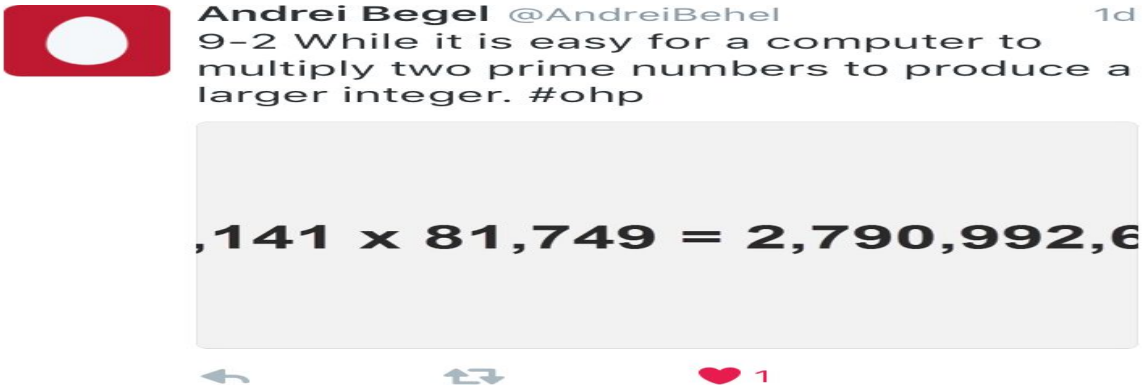
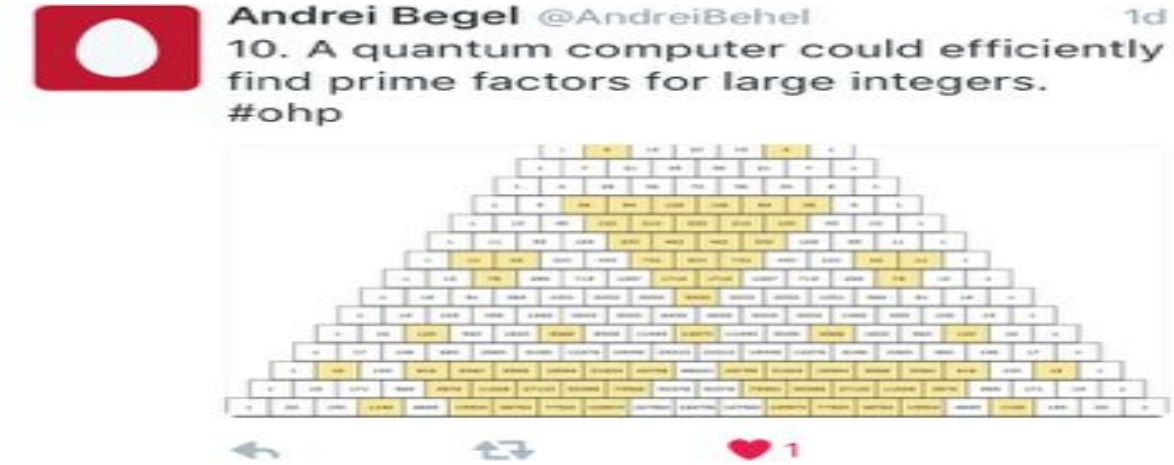

Andrei Begel @AndreiBehel 1d
9-1 In public-key cryptography, data is secured by math problems that are easy to solve, but hard to reverse engineer. #ohp
1


Andrei Begel @AndreiBehel 1d
9-2 While it is easy for a computer to multiply two prime numbers to produce a larger integer. #ohp
,141 x 81,749 = 2,790,992,6
1


Andrei Begel @AndreiBehel 1d
9-3 It takes a long time on a computer to factorize a large enough integer into its component primes. #ohp
15
Prime factors: 3x5
91
Prime factors: 7x13
10395891
0853266275273
092357067028374082375087178
1


Andrei Begel @AndreiBehel 1d
9-4 Widely used today RSA and the Diffie-Hellman key exchange based on this principle. #ohp
Diffie-Hellman key exchange
Two parties jointly establish a shared secret key over an insecure channel that they can then use for encrypted communication. The security of the secret key relies on the hardness of the discrete logarithm problem.
Elliptic curve cryptography
Mathematical properties of elliptic curves
0111 0001
Code-based cryptography
The private key is associated with an error-correcting code and the public key with a scrambled and erroneous version of the code. Security is based on the hardness of decoding a general linear code.
Multivariate cryptography
These schemes rely on the hardness of
1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11. This ability would allow a quantum computer to decrypt many of the cryptographic systems in use today.
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# 3.


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FistOfShadow @ClubEater 3d
0. Will the levitation become commonly used? #ohp
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FistOfShadow @ClubEater 3d
1. Levitation is the process by which an object is held aloft, without mechanical support, in a stable position.#ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 11h
1-2 There're a lot of types of levitation. For example, using diamagnetic levitation we can make the frogs fly. #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 11h
1-3 A cubical magnet levitating over a superconducting material (known as the Meissner effect). #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
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2. It seemed to be fantastical 20 years ago. #ohp
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3. A cubical magnet levitating over a superconducting material (known as the Meissner effect) #ohp
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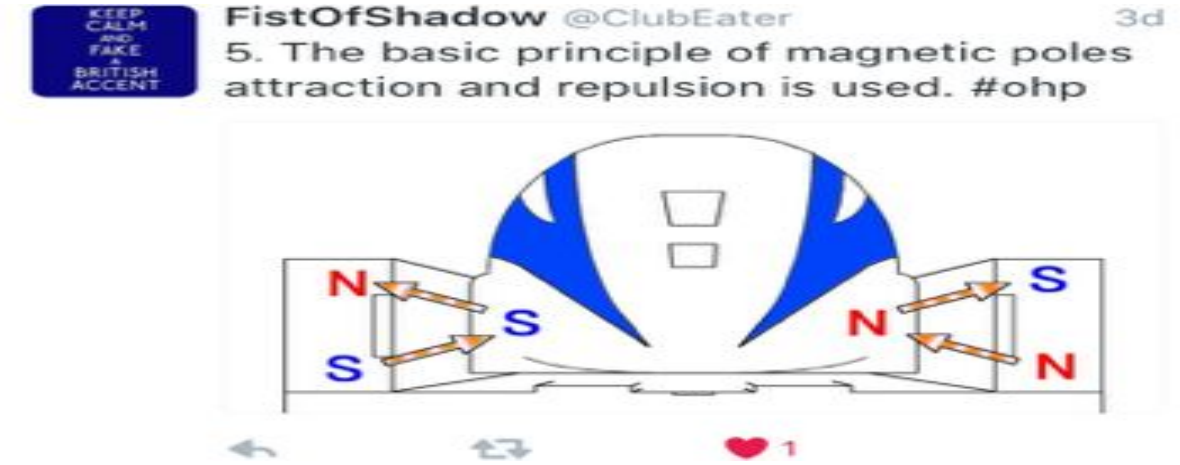
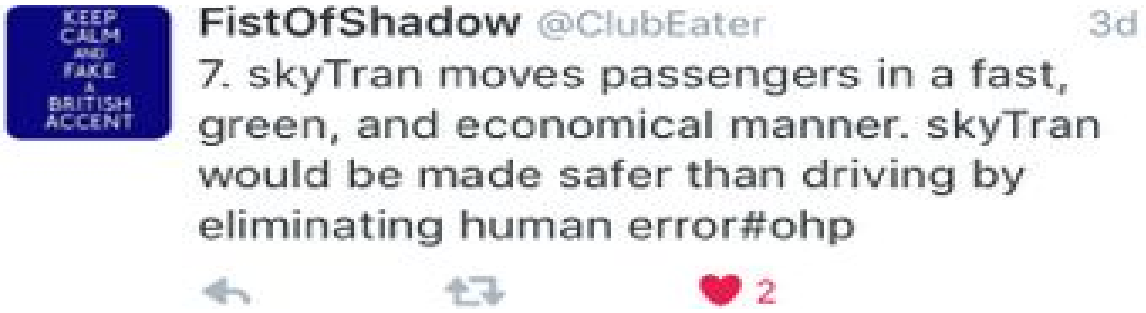
FistOfShadow @ClubEater 3d
4. Magnetical levitation is already actively used in transport systems of Japan, Germany, South Korea, China.#ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
5. The basic principle of magnetic poles attraction and repulsion is used. #ohp
N
S
S
N
S
N
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
7. skyTran moves passengers in a fast, green, and economical manner. skyTran would be made safer than driving by eliminating human error#ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
8. That's how the magic of levitation is becoming a reality nowadays. #ohp
2


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
9. JR-Maglev MLX01 is the current Guiness record holder for train speed with the record of 603 km/h. #ohp
3
1

# IV

Twitter version - Final (28 March 2016)

# 1.


KEEP
CALM
AND
FAKE
A
BRITISH
ACCENT
FistOfShadow @ClubEater 3d
0. Will the levitation become commonly used? #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
1. Levitation is the process by which an object is held aloft, without mechanical support, in a stable position.#ohp
2

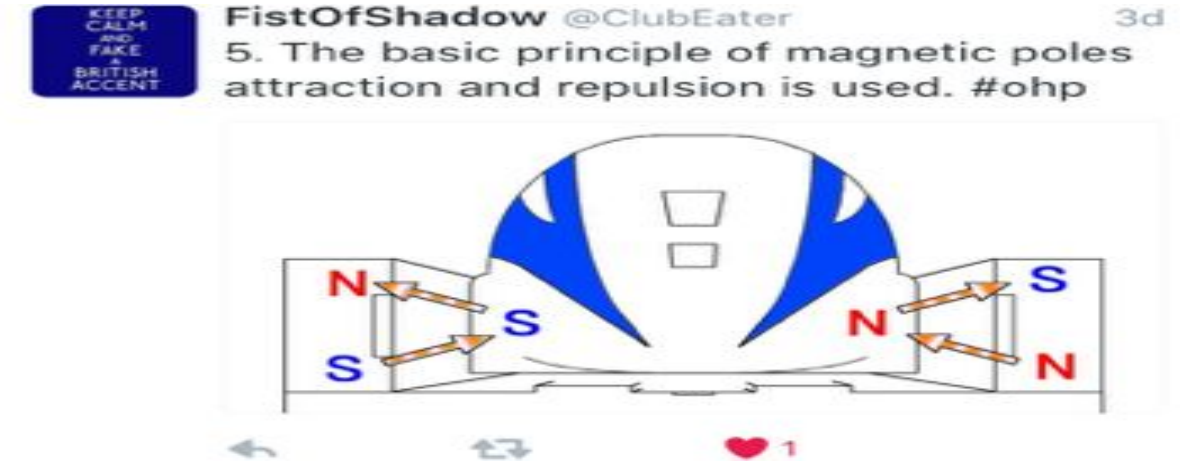

KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 11h
1-2 There're a lot of types of levitation. For example, using diamagnetic levitation we can make the frogs fly. #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 11h
1-3 A cubical magnet levitating over a superconducting material (known as the Meissner effect). #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 1d
2'. It seemed to be fantastical 20 years ago. #ohp


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
2. But today it's a reality. #ohp
1


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 1d
4'. Magnetic levitation is already actively used in transport systems of Japan, Germany, South Korea, China.#ohp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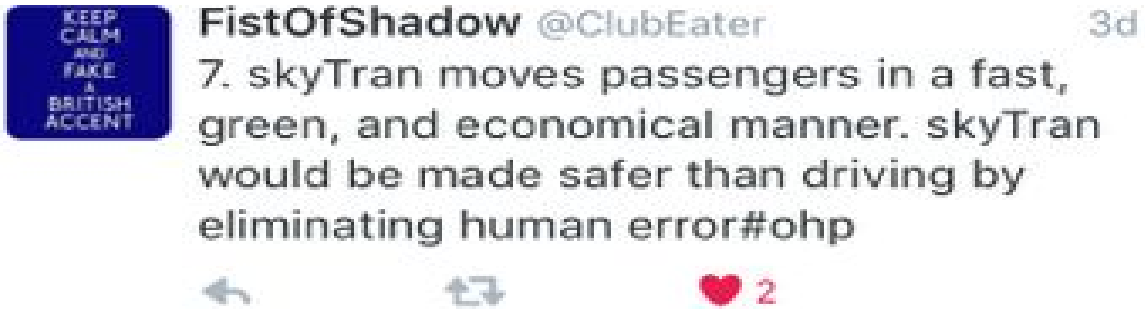
FistOfShadow @ClubEater 3d
5. The basic principle of magnetic poles attraction and repulsion is used. #ohp
N
S
S
N
S
N
1


KEEP CALM AND FAKE A BRITISH ACCENT
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2

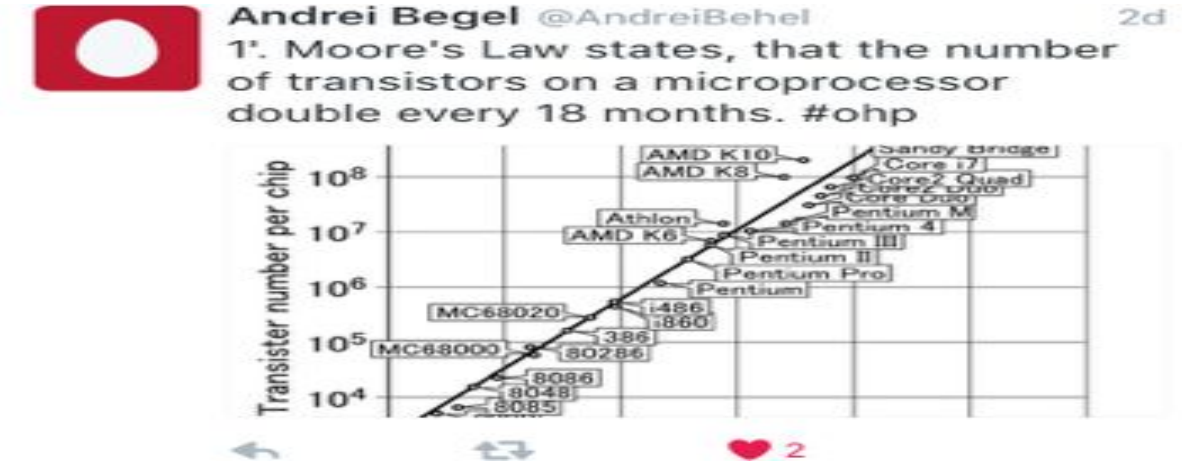

KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 1d
8-1. Magnetically levitated city is a concept of Chinese designer Wei Zhao of future human cities. #ohp
1

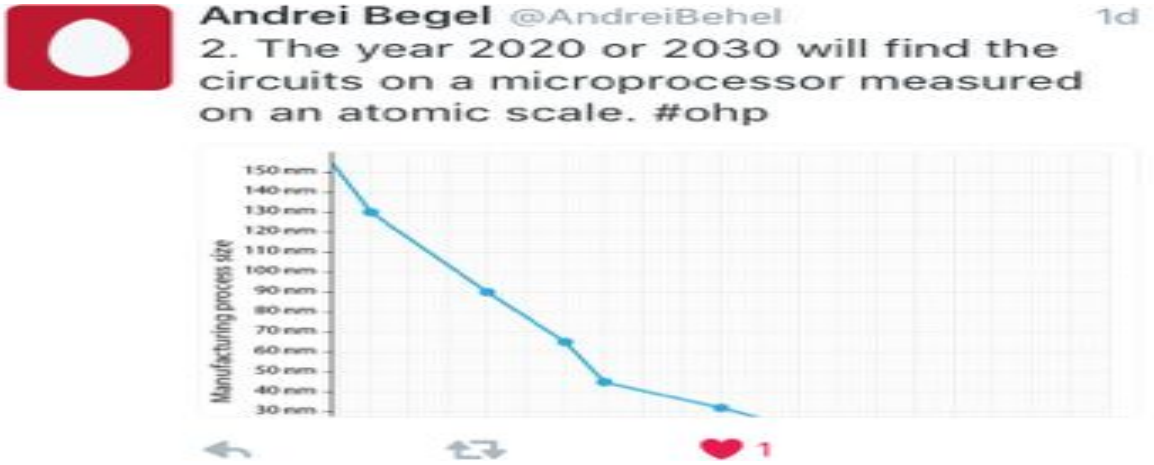

KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 1d
8-2. Maglev space launch system was researched by NASA but the cost of such track is too much ($20 biilions). #ohp


KEEP CALM AND FAKE A BRITISH ACCENT
FistOfShadow @ClubEater 3d
9. JR-Maglev MLX01 is the current Guiness record holder for train speed with the record of 603 km/h. #ohp
3
1

# 2.


Andrei Begel @AndreiBehel 1d
0. What Is the Future of Computers?
#ohp
1


Andrei Begel @AndreiBehel 2d
1'. Moore's Law states, that the number of transistors on a microprocessor double every 18 months. #ohp
Transister number per chip
10^8
10^7
10^6
10^5
10^4
AMD K10
AMD K8
Sandy Bridge
Core i7
Core2 Quad
Core Duo
Pentium M
Athlon
AMD K6
Pentium 4
Pentium III
Pentium II
Pentium Pro
Pentium
MC68020
i486
i860
386
MC68000
80286
8086
8048
8085
2

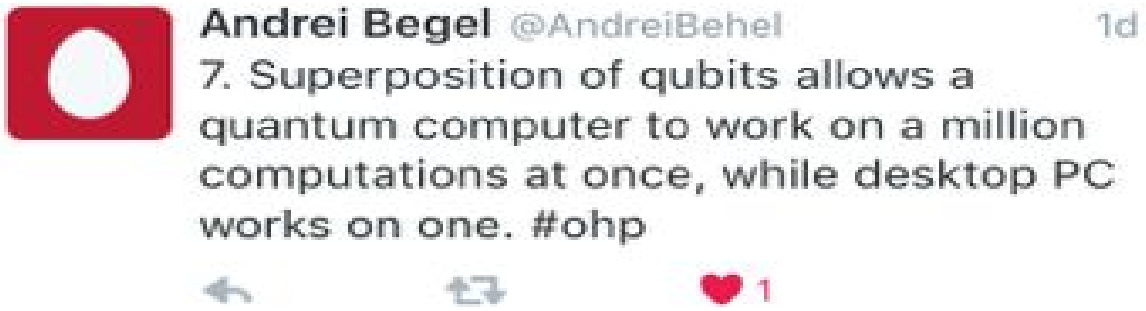

Andrei Begel @AndreiBehel 1d
2. The year 2020 or 2030 will find the circuits on a microprocessor measured on an atomic scale. #ohp
Manufacturing process size
150 nm
140 nm
130 nm
120 nm
110 nm
100 nm
90 nm
80 nm
70 nm
60 nm
50 nm
40 nm
30 nm
1

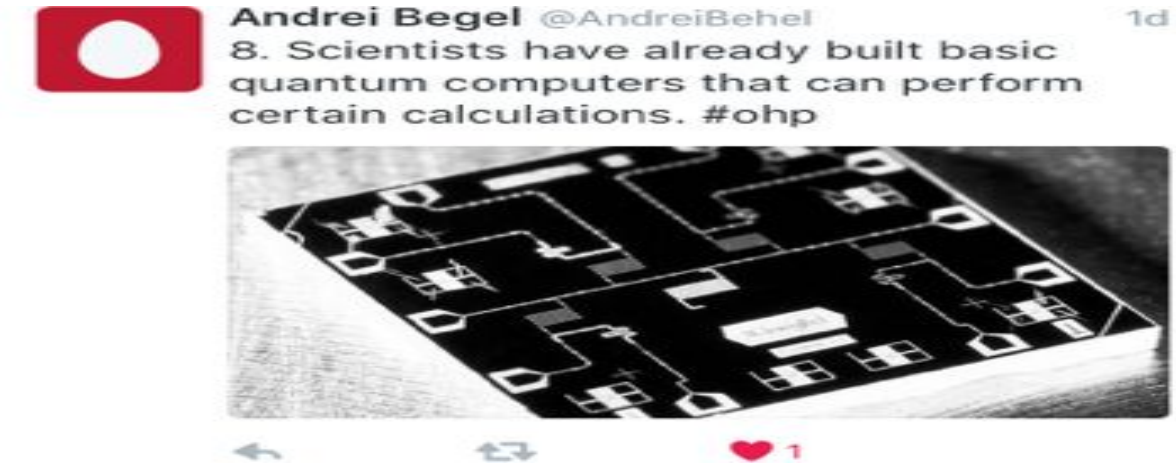

Andrei Begel @AndreiBehel 1d
3. The logical next step will be to create quantum computers. #ohp
QUANTUM COMPUTER
1


Andrei Begel @AndreiBehel 2d
4'. Quantum computing was first theorized in 1981 by Paul Benioff at the Argonne National Laboratory. #ohp
2

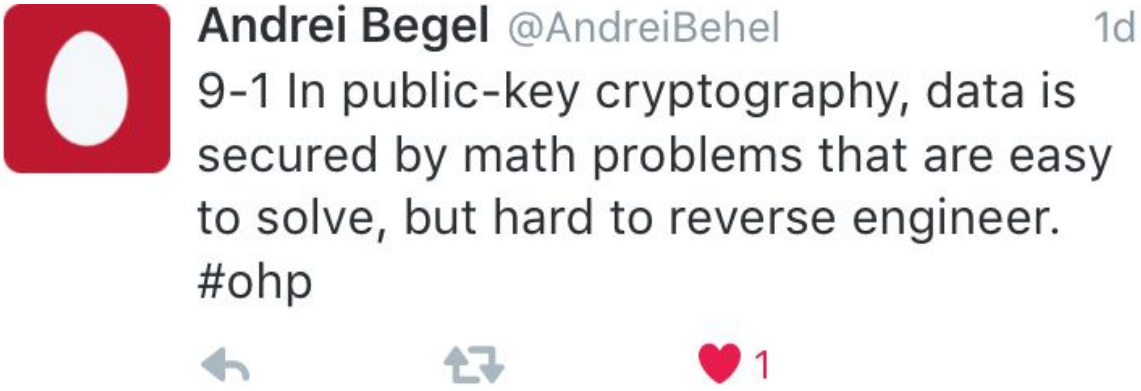

Andrei Begel @AndreiBehel 1d
5. Today's computers work by manipulating bits that exist in one of two states: a 0 or a 1. #ohp
1

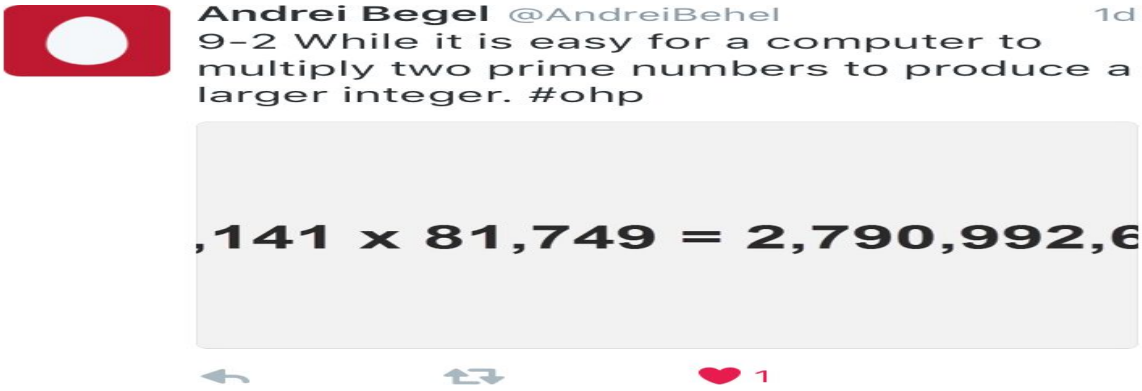

Andrei Begel @AndreiBehel 1d
6. Quantum computers aren't limited to two states; they encode information as quantum bits, or qubits. #ohp
al register
Quantum re
101
000 001 010
100 101 110
1


Andrei Begel @AndreiBehel 1d
7. Superposition of qubits allows a quantum computer to work on a million computations at once, while desktop PC works on one. #ohp
1


Andrei Begel @AndreiBehel 1d
8. Scientists have already built basic quantum computers that can perform certain calculations. #ohp
1

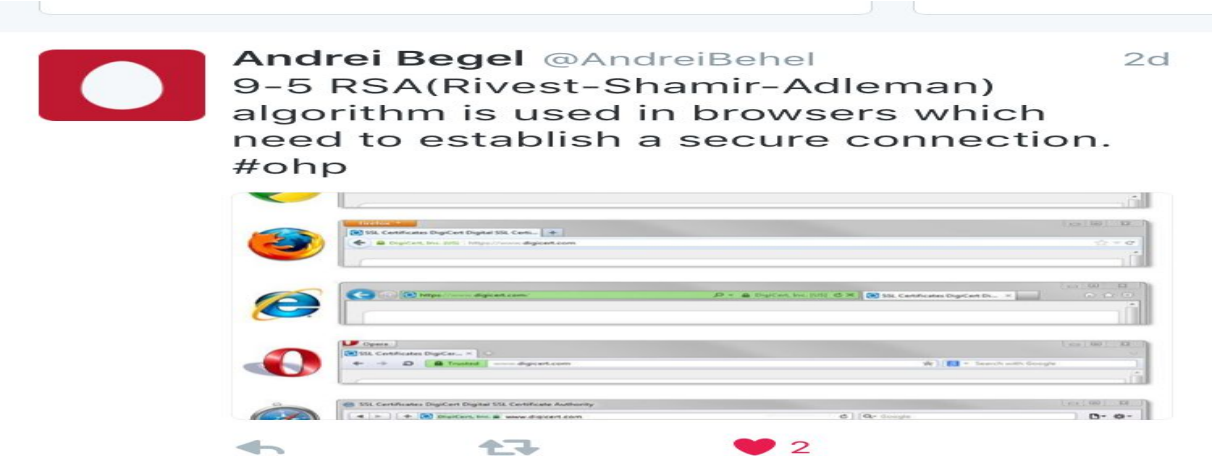

Andrei Begel @AndreiBehel 1d
9. At a NASA lab in Silicon Valley, Google is testing a D-Wave quantum computer. #ohp
D-WAVE
D-WAVE
1

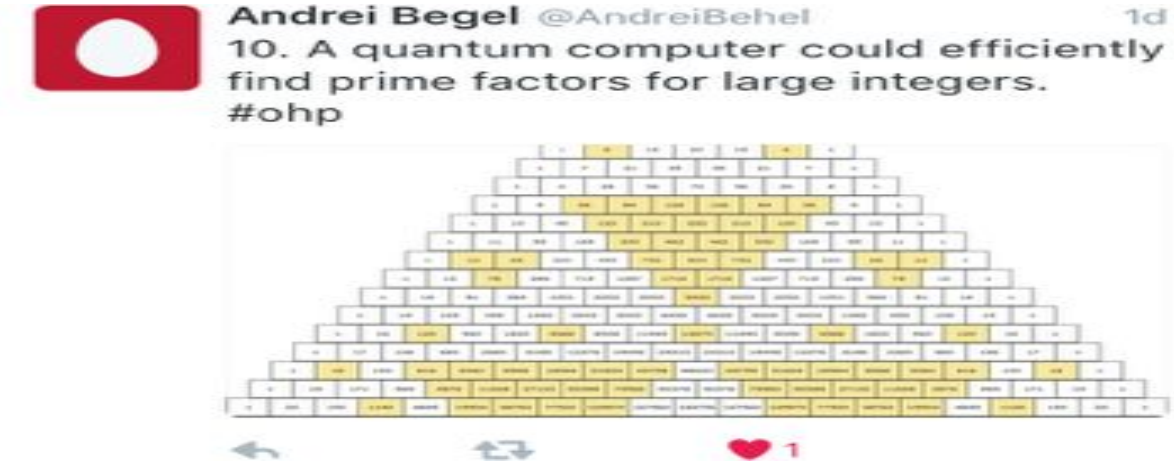

Andrei Begel @AndreiBehel 1d
9-1 In public-key cryptography, data is secured by math problems that are easy to solve, but hard to reverse engineer. #ohp
1


Andrei Begel @AndreiBehel 1d
9-2 While it is easy for a computer to multiply two prime numbers to produce a larger integer. #ohp
,141 x 81,749 = 2,790,992,6
1


Andrei Begel @AndreiBehel 1d
9-3 It takes a long time on a computer to factorize a large enough integer into its component primes. #ohp
15
Prime factors: 3x5
91
Prime factors: 7x13
10395891508532662752730923570670283740823750871785
1


Andrei Begel @AndreiBehel 1d
9-4 Widely used today RSA and the Diffie-Hellman key exchange based on this principle. #ohp
Diffie-Hellman key exchange
Two parties jointly establish a shared secret key over an insecure channel that they can then use for encrypted communication. The security of the secret key relies on the hardness of the discrete logarithm problem.
Code-based cryptography
The private key is associated with an error-correcting code and the public key with a scrambled and erroneous version of the code. Security is based on the hardness of decoding a general linear code.
Elliptic curve cryptography
Multivariate cryptography
1


Andrei Begel @AndreiBehel 2d
9-5 RSA(Rivest-Shamir-Adleman) algorithm is used in browsers which need to establish a secure connection. #ohp
2


Andrei Begel @AndreiBehel 1d
10. A quantum computer could efficiently find prime factors for large integers.
#ohp
1


Andrei Begel @AndreiBehel 1d
11. This ability would allow a quantum computer to decrypt many of the cryptographic systems in use today.
#ohp
1

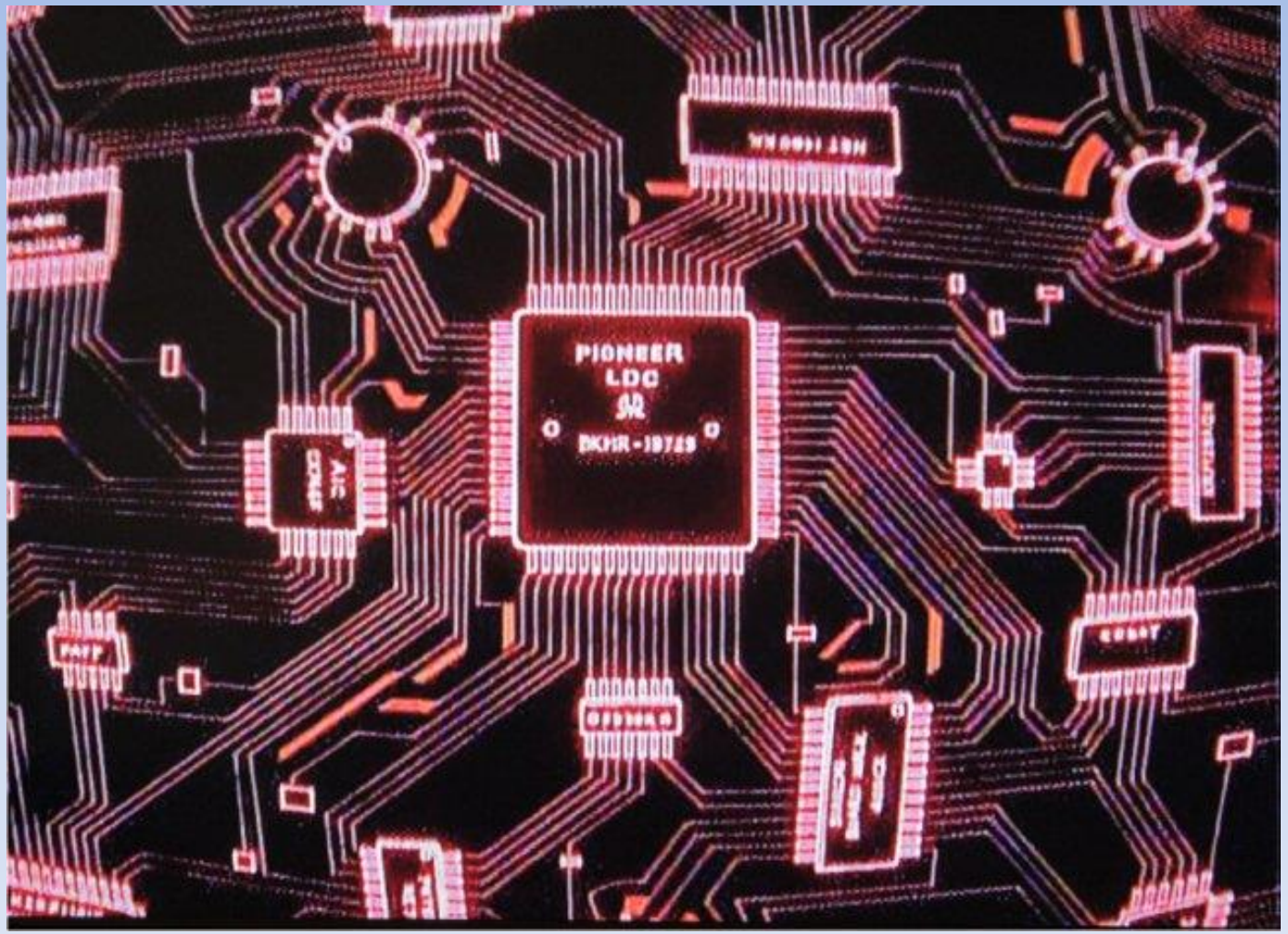

Andrei Begel @AndreiBehel 1d
12. Quantum computing is still in early stages of development. But quantum computers will replace silicon chips in the future. #ohp
1

# IV

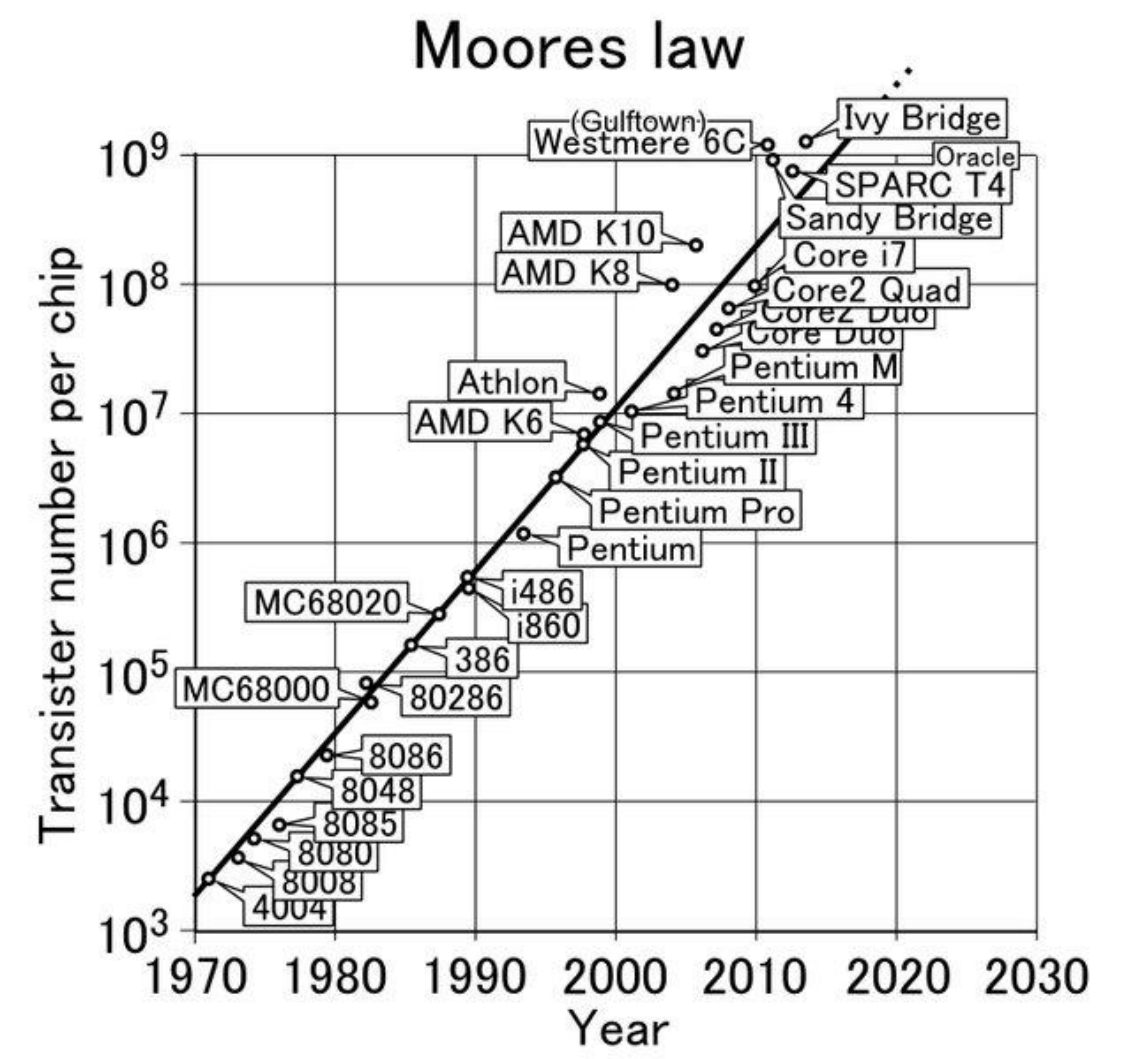
PDF version - Kick off (18 April 2016)

# 1.

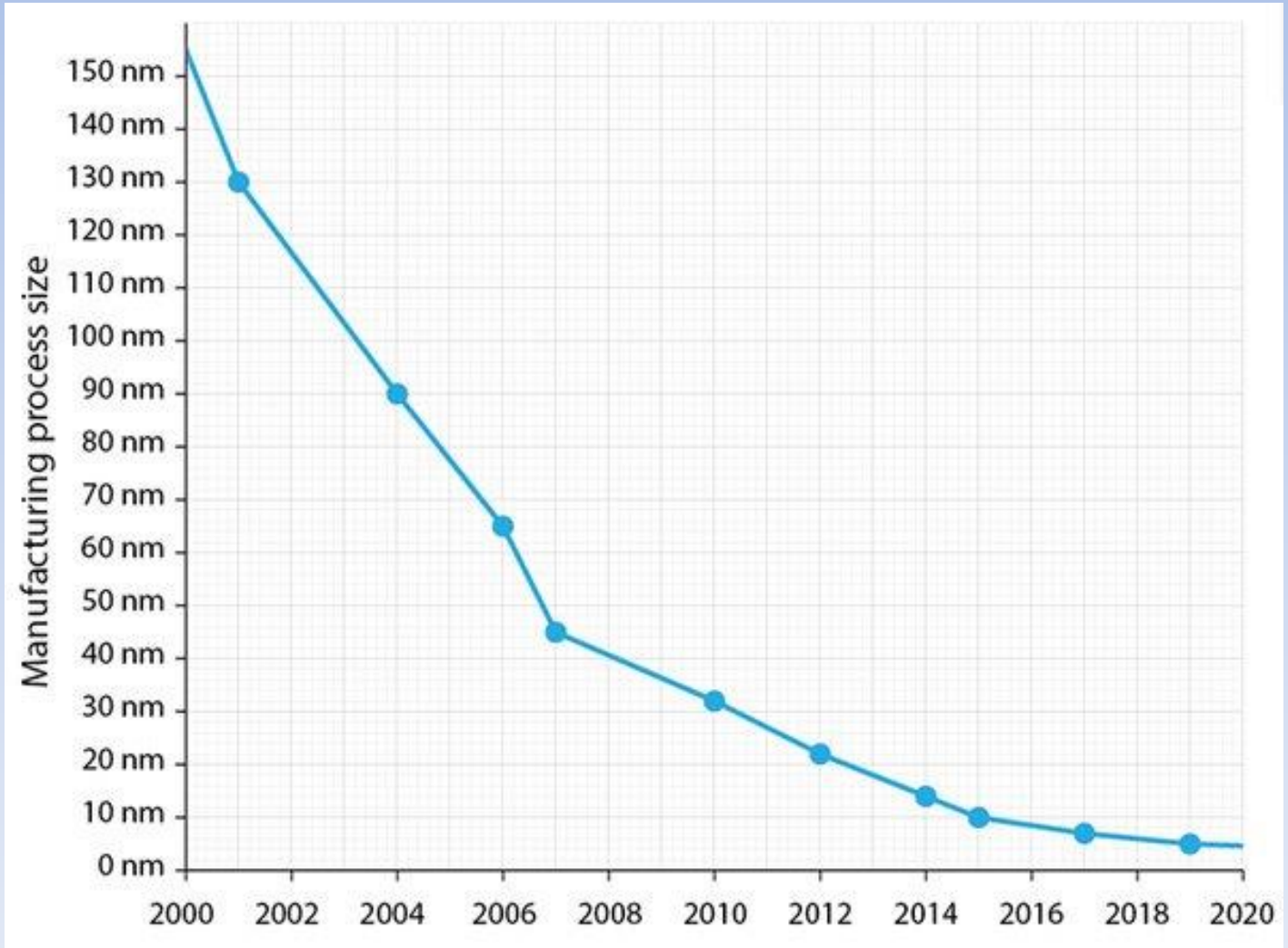
# What Is the Future of Computers?



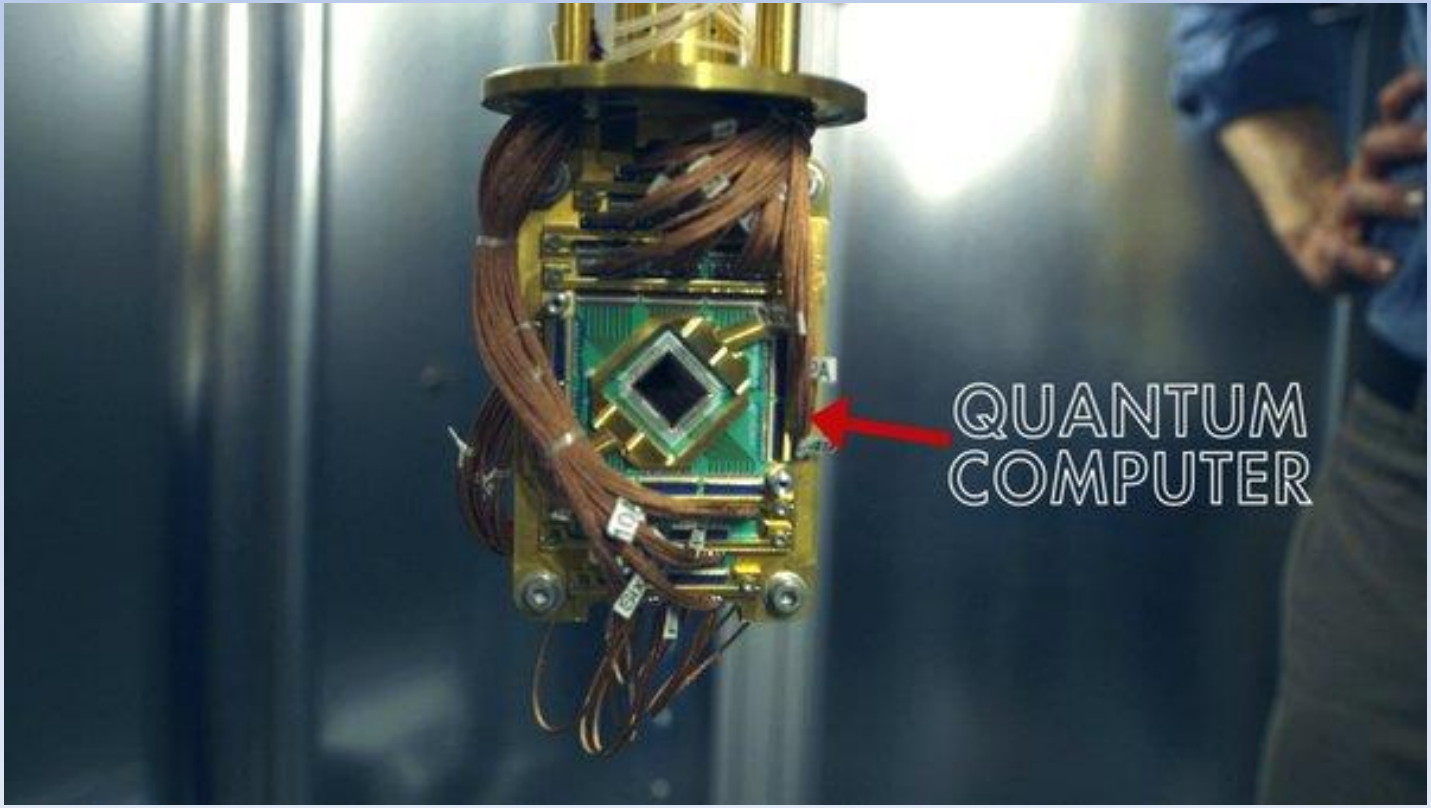
- Moore's Law states, that the number of transistors on a microprocessor double every 18 months.



- The year 2020 or 2030 will find the circuits on a microprocessor measured on an atomic scale.



- The logical next step will be to create quantum computers, which will harness the power of atoms and molecules to perform memory and processing tasks.



History

- Quantum computing was first theorized in 1981 by Paul Benioff at the Argonne National Laboratory.
- Benioff theorized about creating a quantum Turing machine.

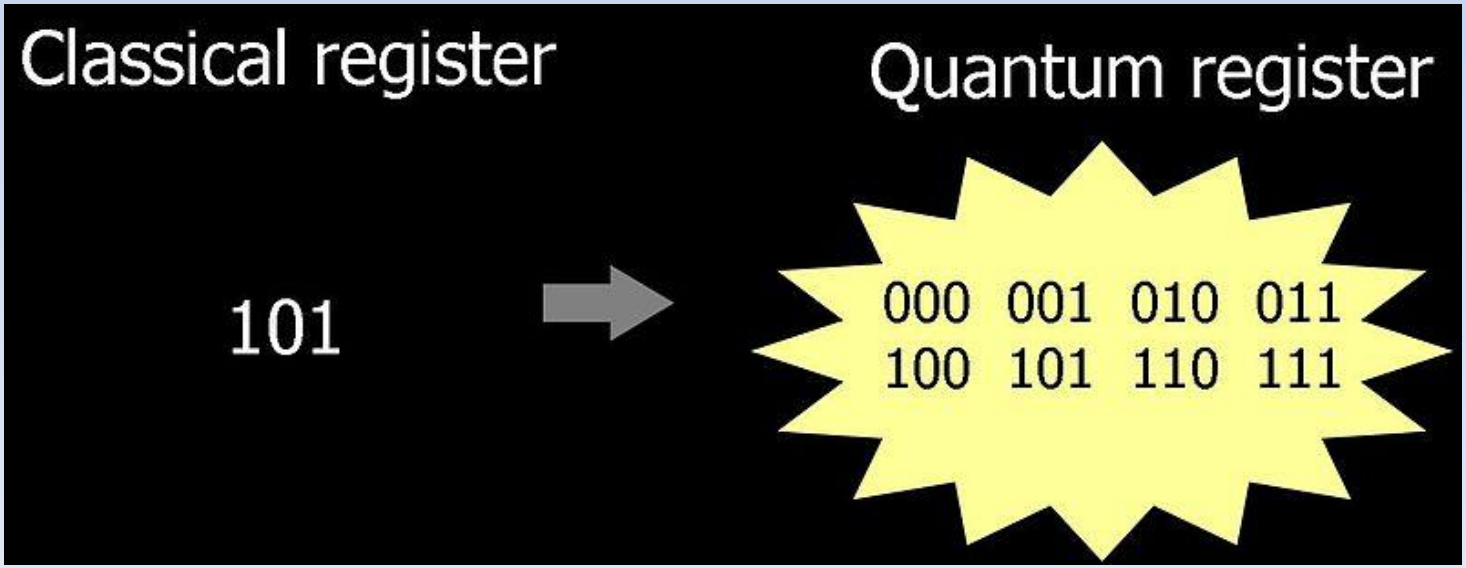
Argonne National Laboratory campus

## Concept of quantum computing

- Today's computers work by manipulating bits that exist in one of two states: a 0 or a 1.
- On the machine level, this either/or dichotomy is represented using electrical circuits which can either be closed, in which case a current flows, or open, in which case there isn't a current.

## Concept of quantum computing

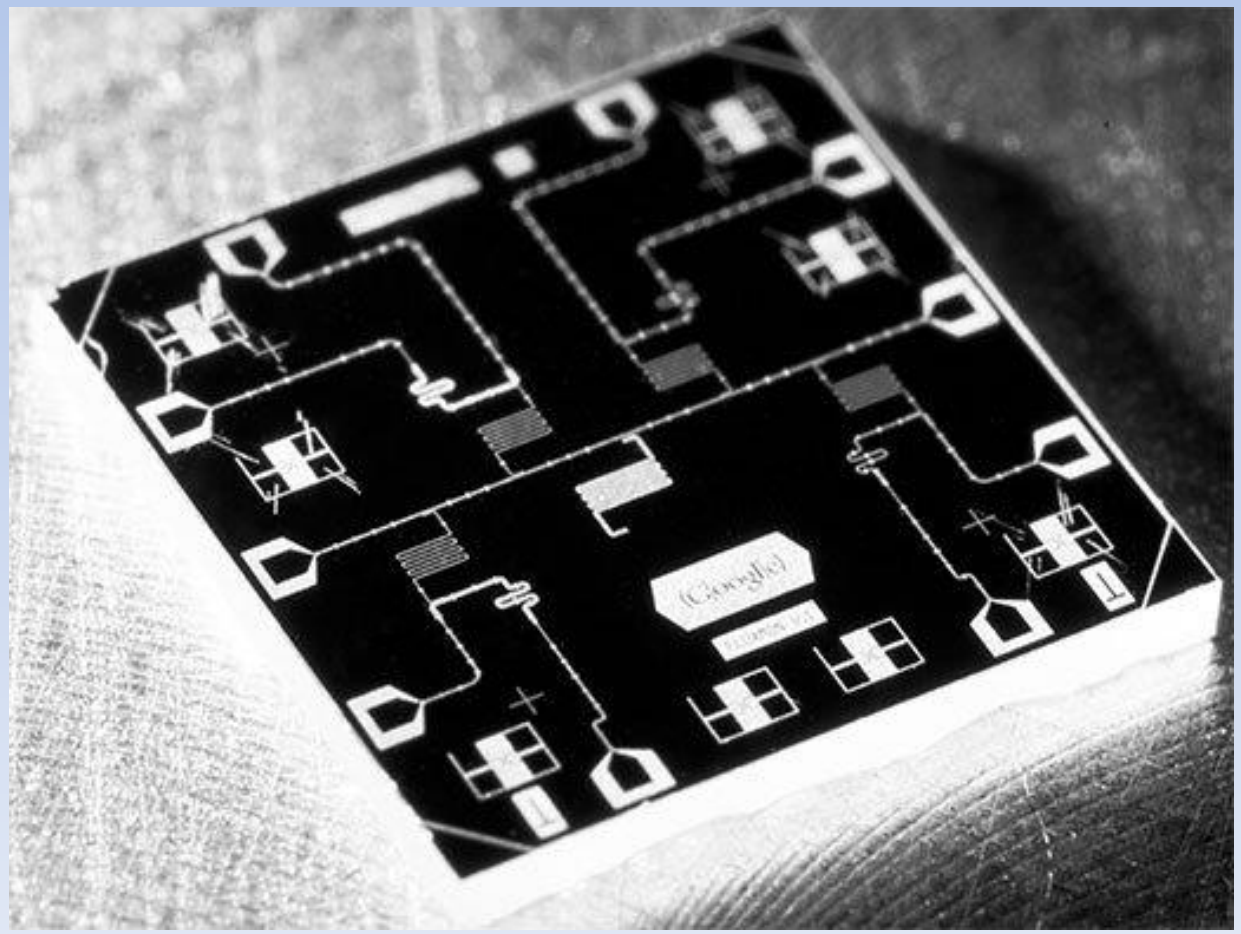
- Quantum computers aren't limited to two states; they works with particles that can be in superposition.
- Rather than representing *bits* — such particles would represent *qubits*, which can take on the value 0, or 1, or both simultaneously.



- This superposition of qubits is what gives quantum computers their inherent parallelism.
- This parallelism allows a quantum computer to work on a million computations at once, while desktop PC works on one.

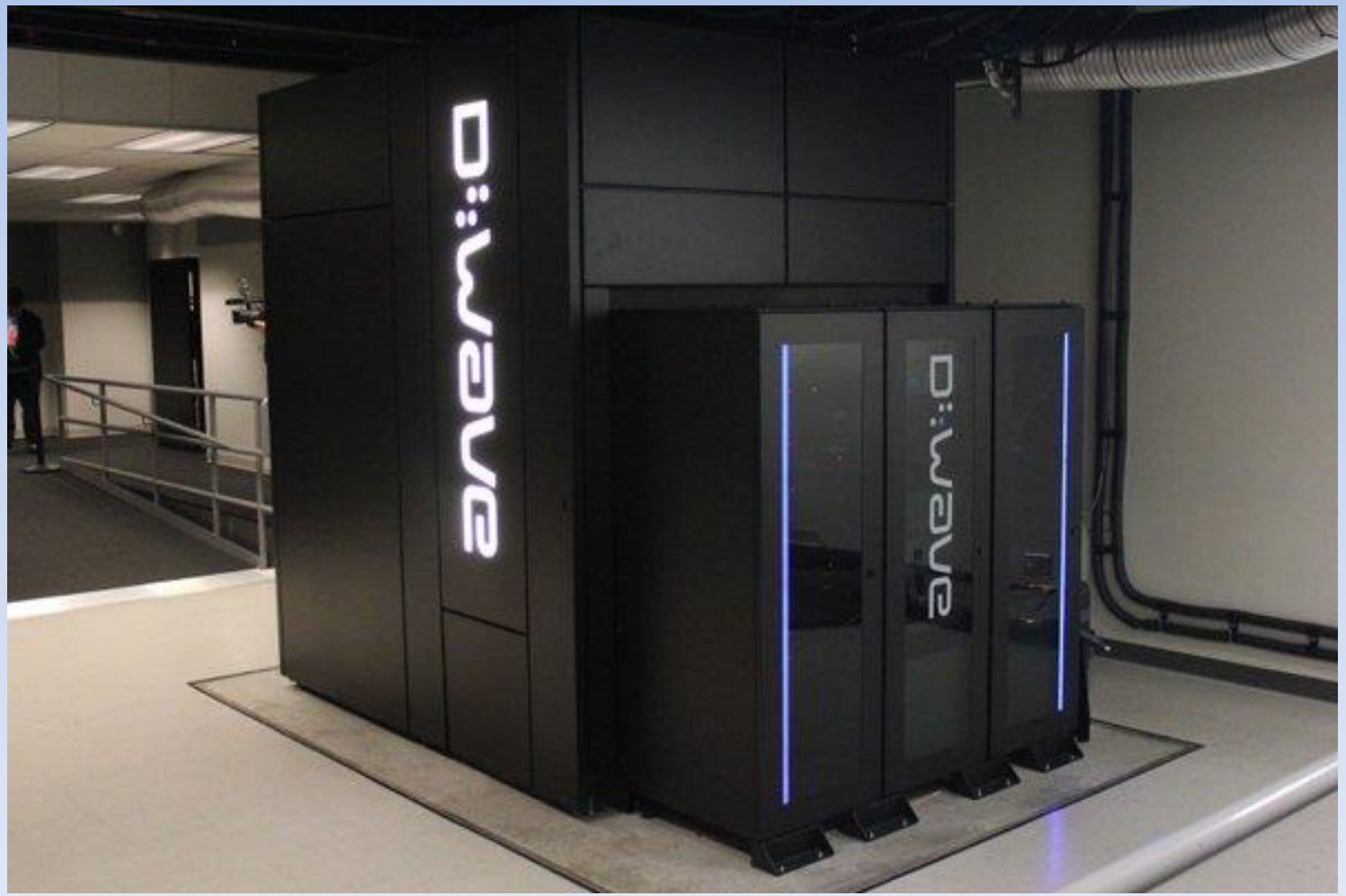
Implementation

- Scientists have already built basic quantum computers that can perform certain calculations.



Implementation

- At a NASA lab in Silicon Valley, Google is testing a D-Wave 2X quantum computer.

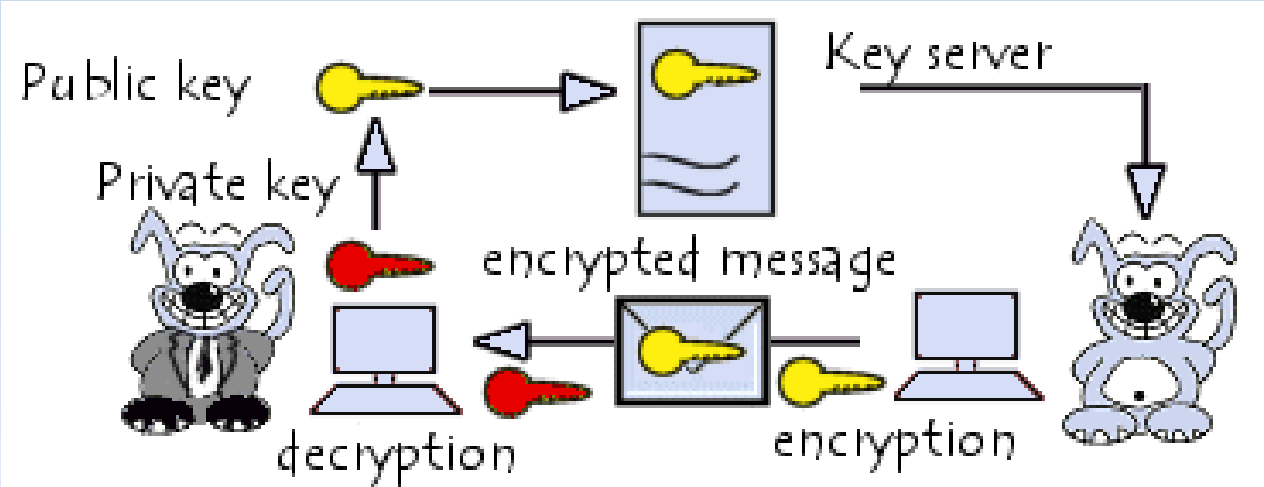


- In public-key cryptography, data is secured by math problems that are easy to solve, but hard to reverse engineer.
- While it is easy for a computer to multiply two prime numbers to produce a larger integer.

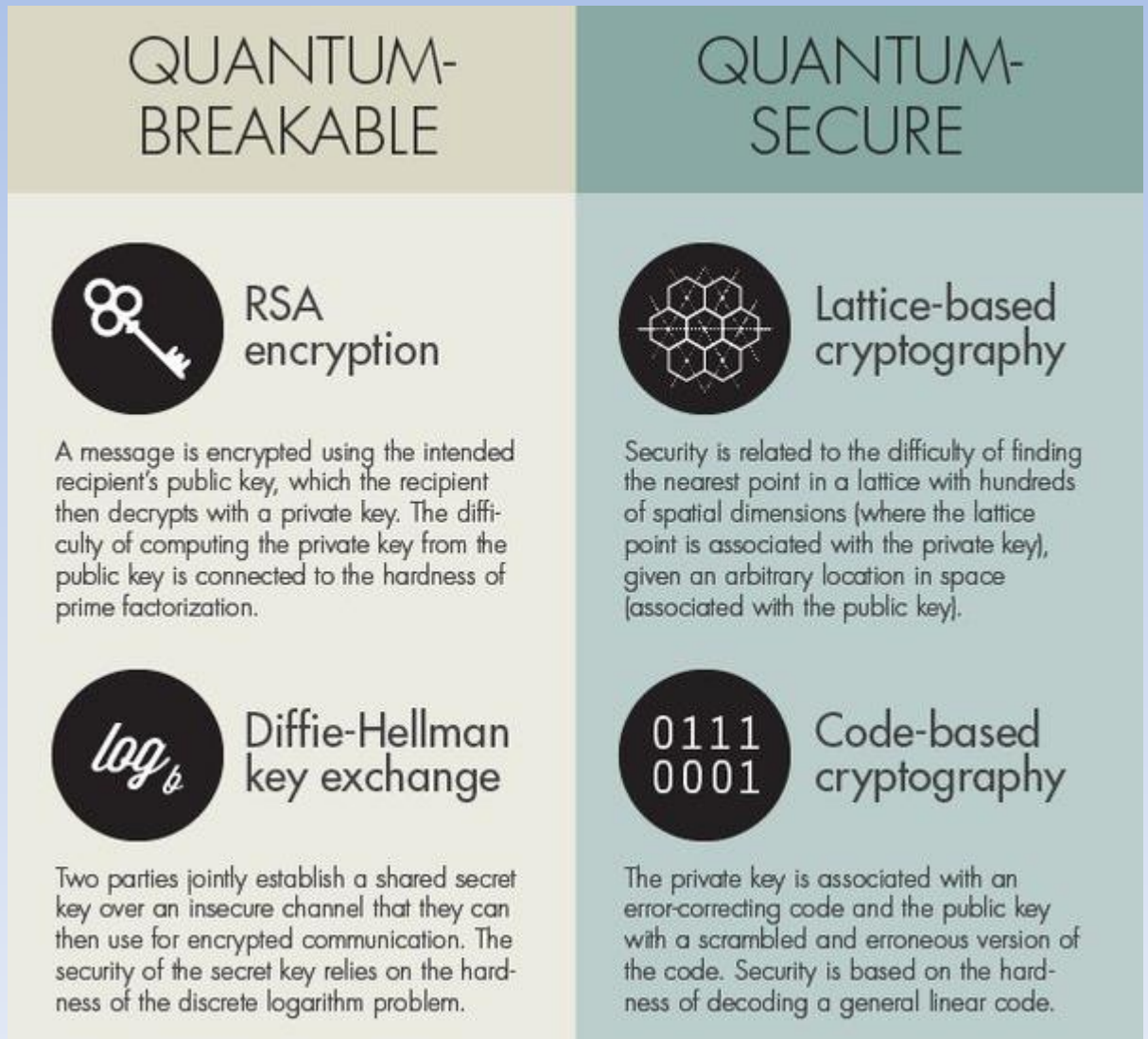
**34,141 x 81,749 = 2,790,992,609**

- It takes an impractically long time on a computer to factorize a large enough integer into its component primes.

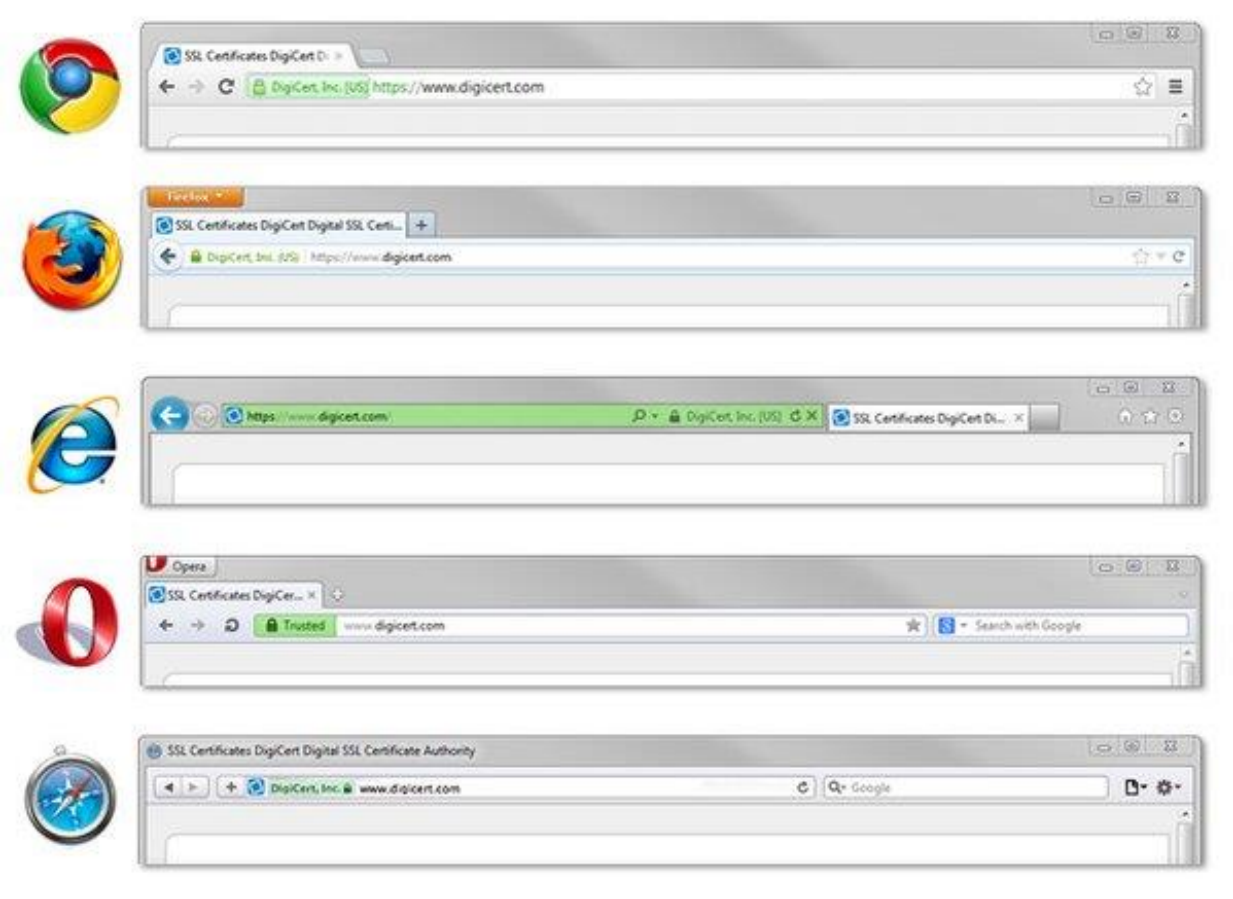
- In a crypto scheme based on prime factorization, the primes serve as a person's "private key," which is not shared.
- The product of the primes serves as the "public key," which is distributed publicly.
- When someone else uses the public key to encrypt a message, only the person in possession of the private key can decrypt it.



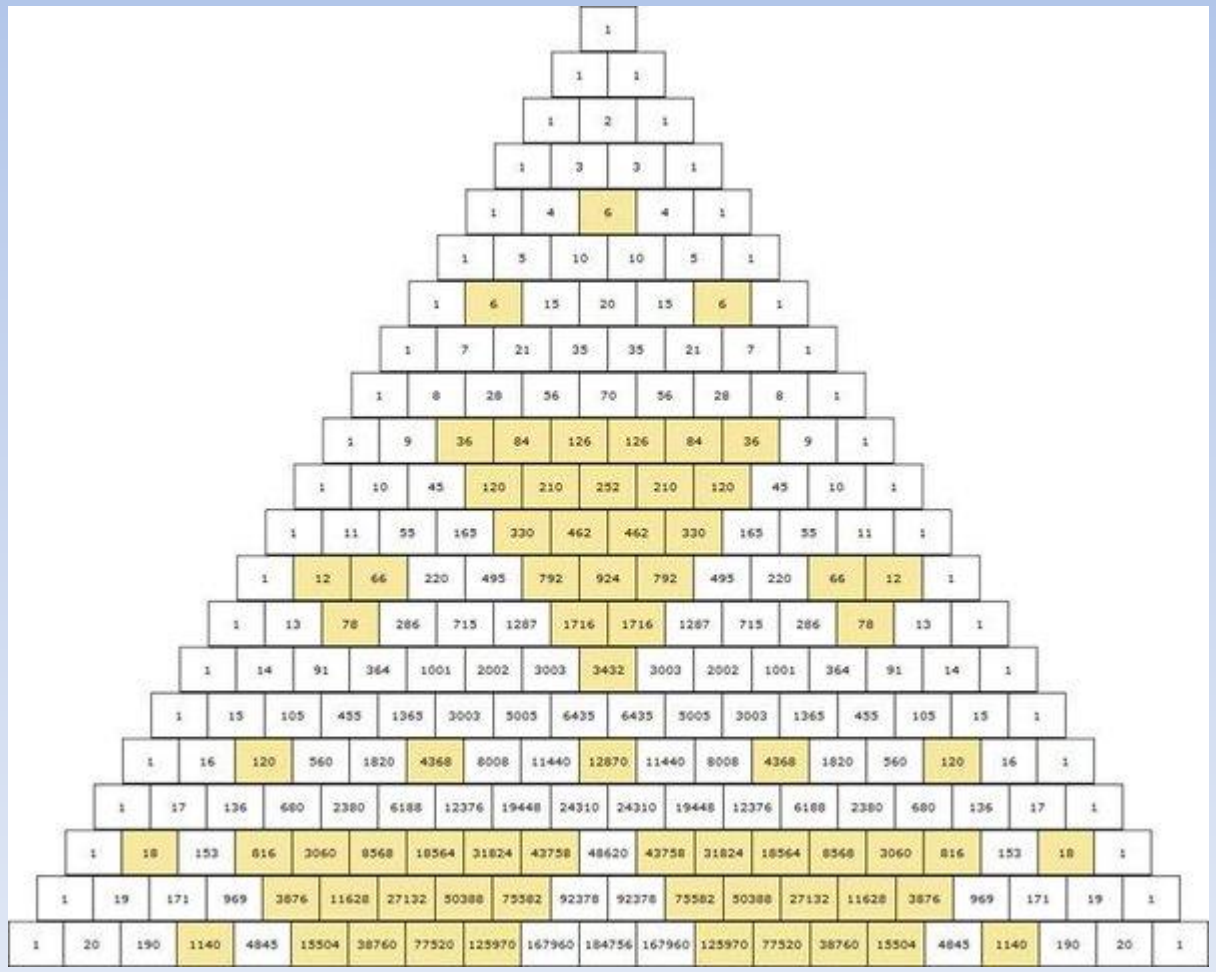
- Widely used today RSA and the Diffie-Hellman key exchange based on this principle.



- RSA(Rivest-Shamir-Adleman) algorithm is used in browsers which need to establish a secure connection.
- Every time you visit a website with a URL that begins “HTTPS,” that algorithm is used.



- A quantum computer could efficiently find prime factors for large integers.



- This ability would allow a quantum computer to decrypt many of the cryptographic systems in use today.

## Conclusion

- Quantum computing is still in early stages of development. But quantum computers will replace silicon chips in the future, just like the transistor once replaced the vacuum tube.

# 2.

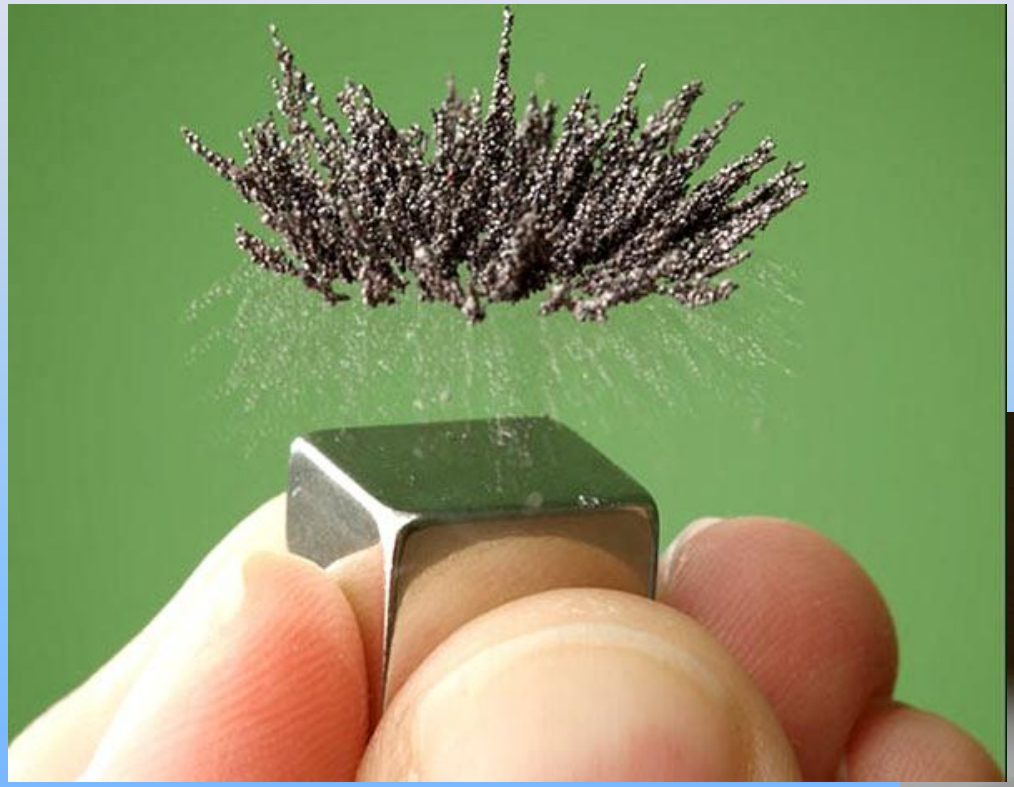
# Will the levitation become commonly used?

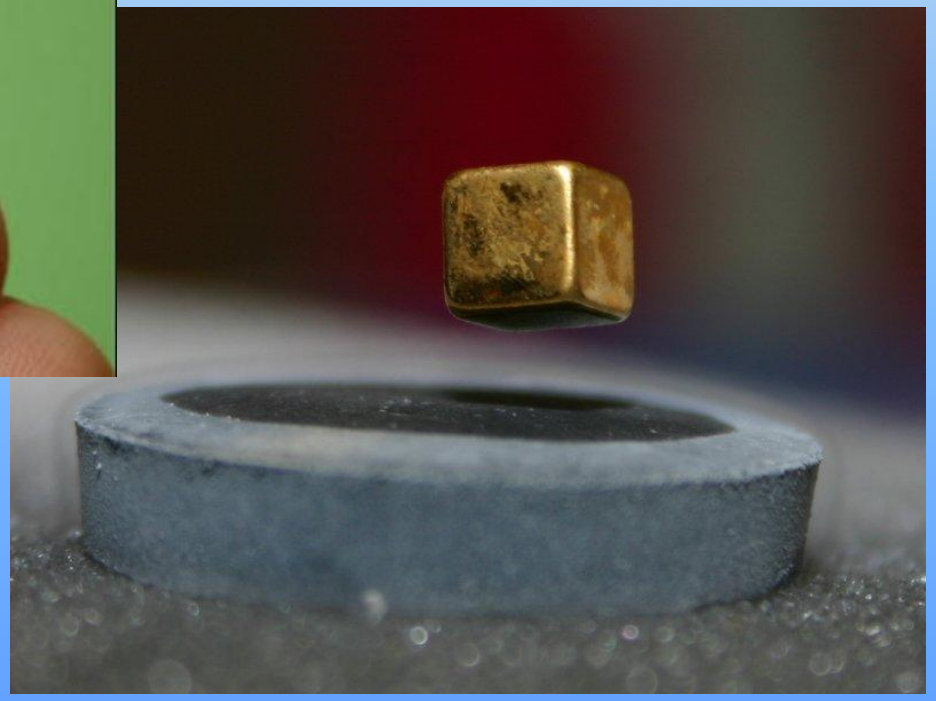
Raman Haivaronski AC-43I

**Levitation is the process by which an object is held aloft, without mechanical support, in a stable position.**

**There're a lot of types of levitation. For example, using diamagnetic levitation we can make the frogs fly. There are also such types of levitation such as acoustic levitation and optic levitation.**

**A cubical magnet levitating over a superconducting material (known as the Meissner effect),**

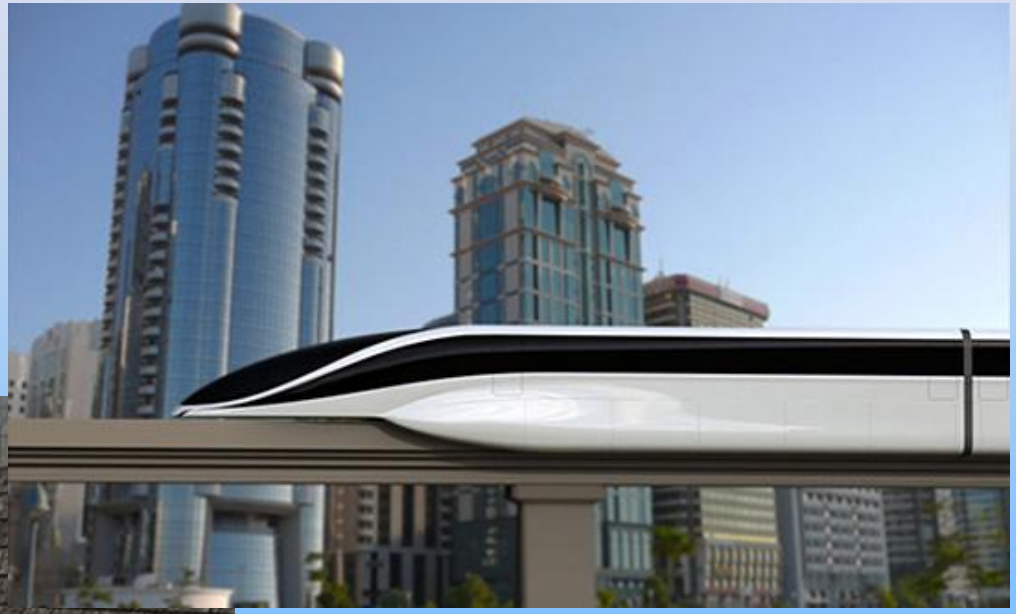




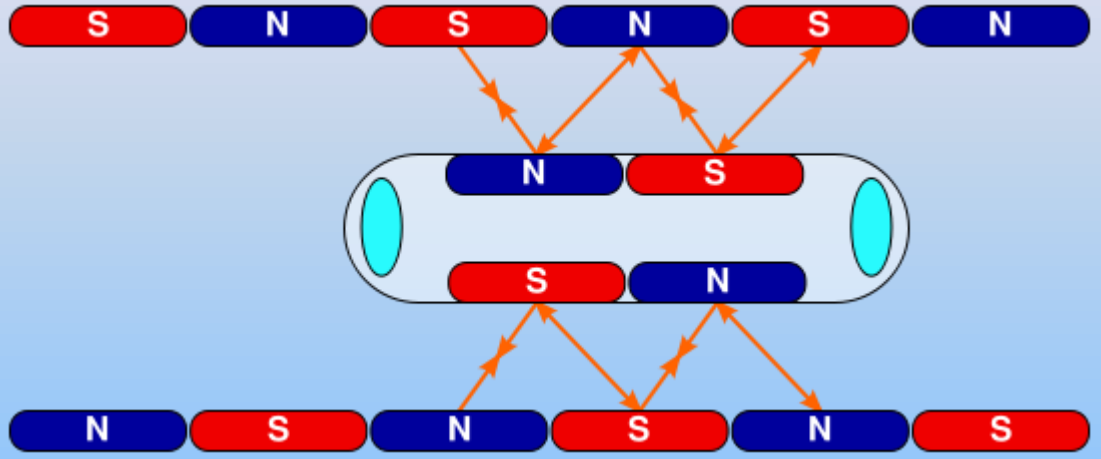

It seemed to be fantastic 20 years ago.

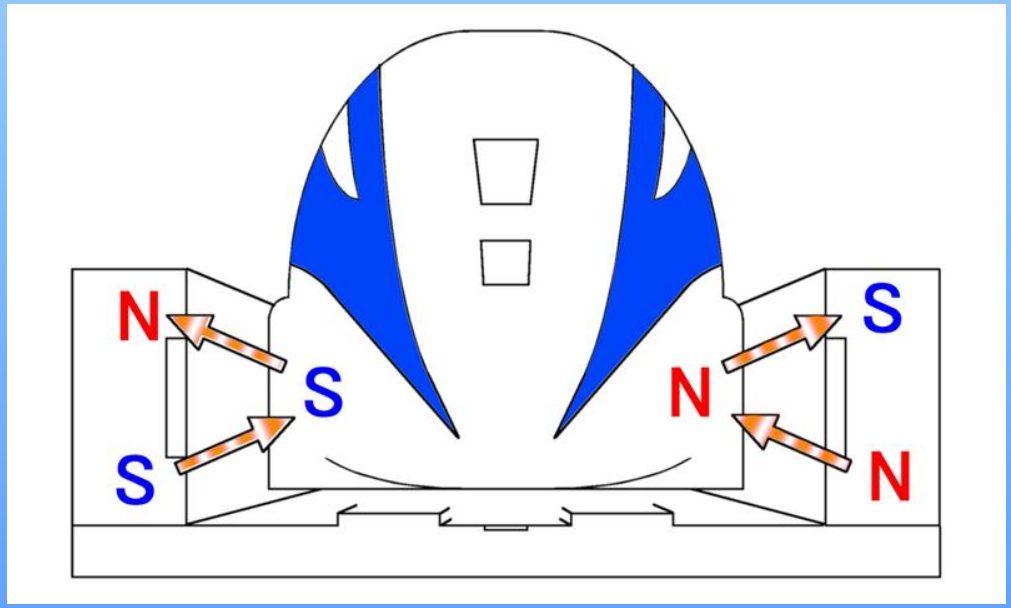
**But today it's a reality. As an example let’s take maglevs as one of the most useful inventions that use levitation.**


**Magnetic levitation is already actively used in transport systems of Japan, Germany, South Korea, China.**



# The basic principle of magnetic poles attraction and repulsion is used.



**SkyTran is a patented, high-speed, low-cost, elevated system created by NASA. The system is now being tested in Tel-Aviv, Israel.**

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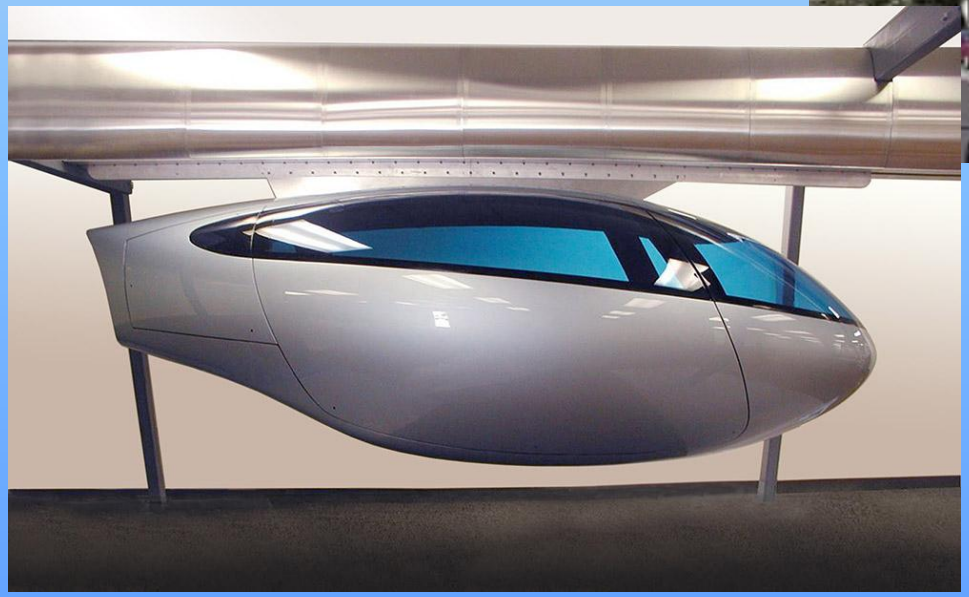

**Magnetically levitated city is a concept of Chinese designer Wei Zhao of future human cities.**

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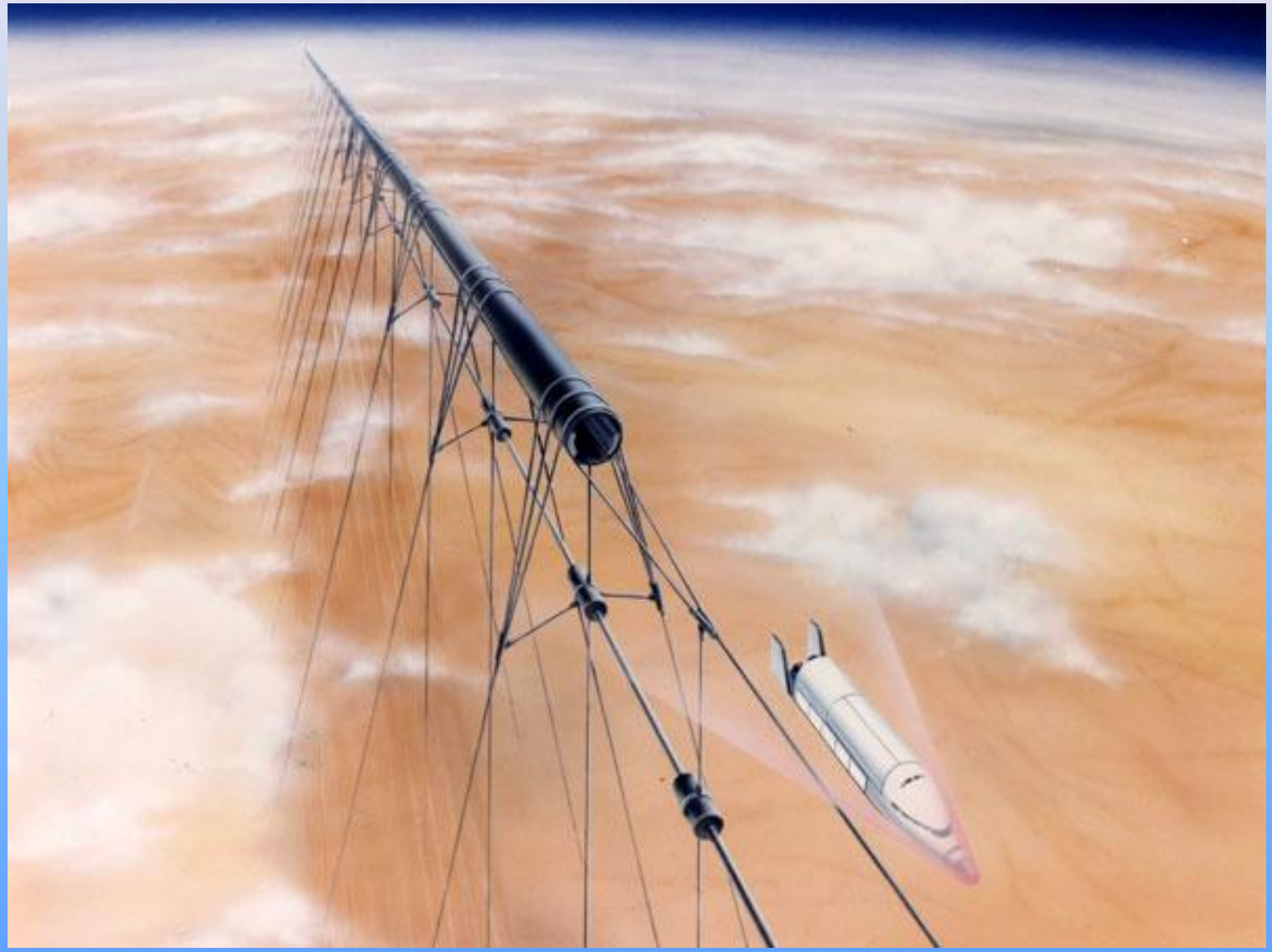


**That's how the magic of levitation is becoming a reality nowadays.**

**I want to conclude with an interesting fact: JR-Maglev MLX01 is the current Guinness record holder for train speed with the record of 603 km/h.**

# V

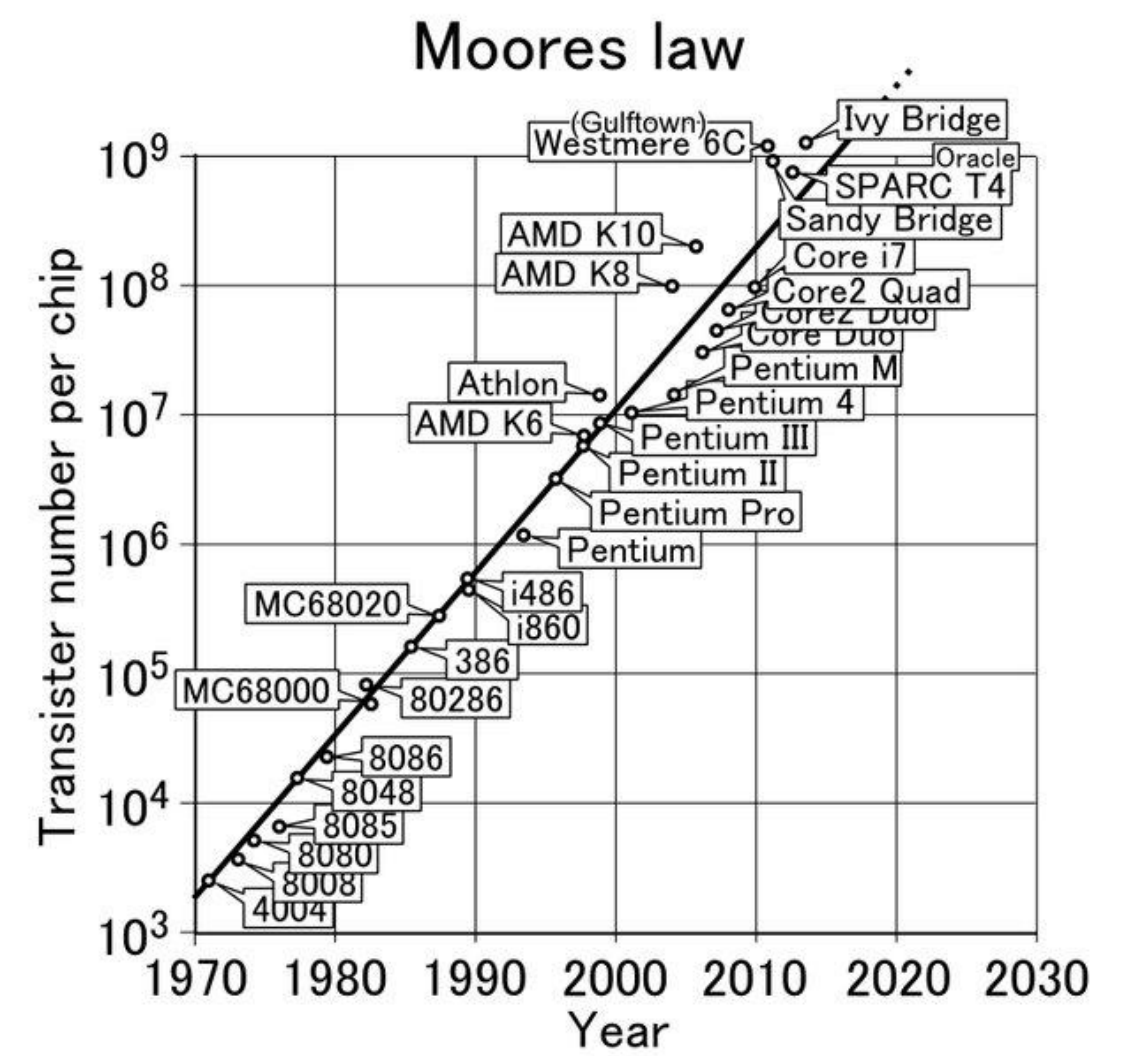
PDF version - Final (1 May 2016)

# 1.

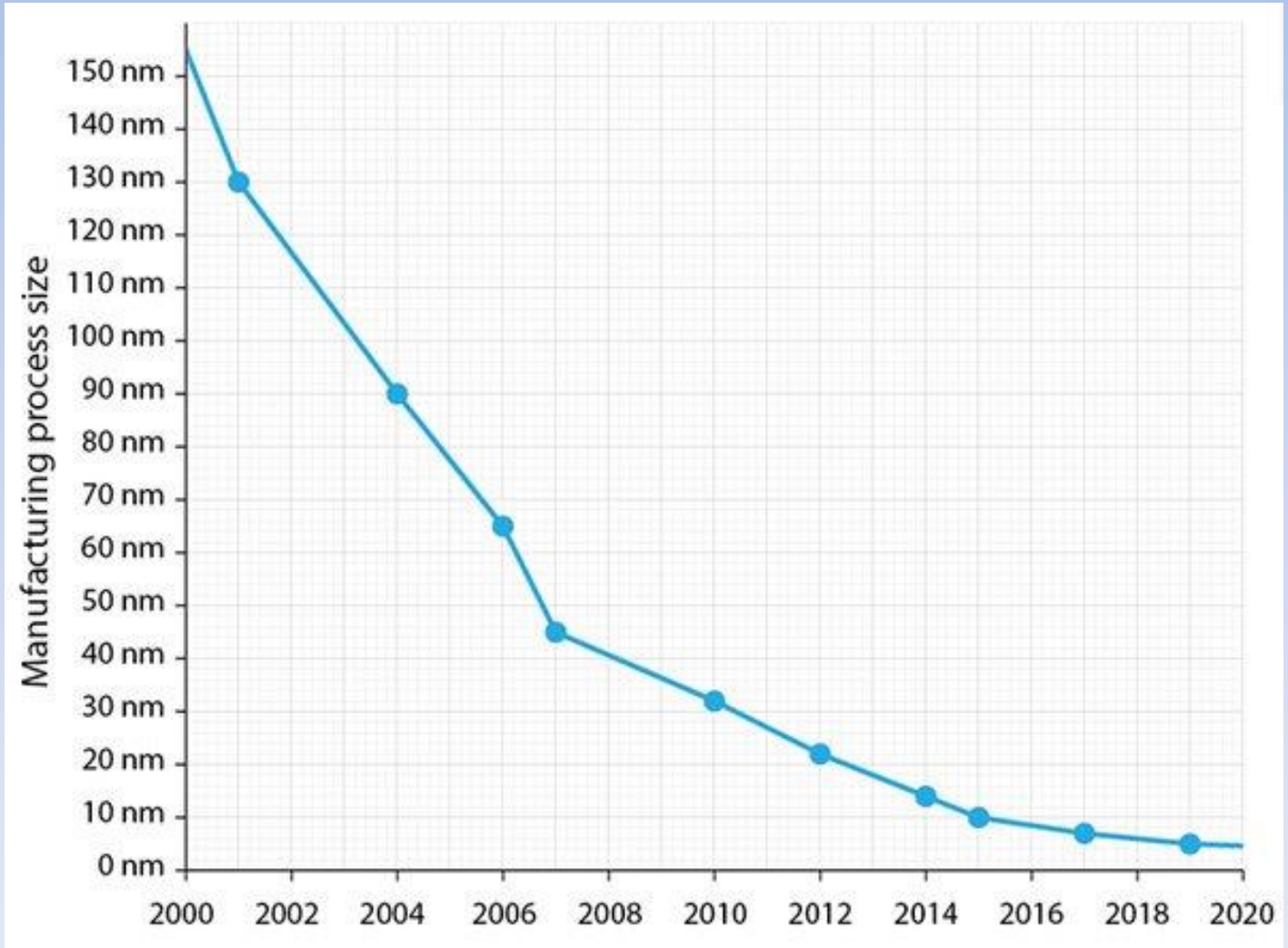
# What Is the Future of Computers?

Andrei Begel АС-43И

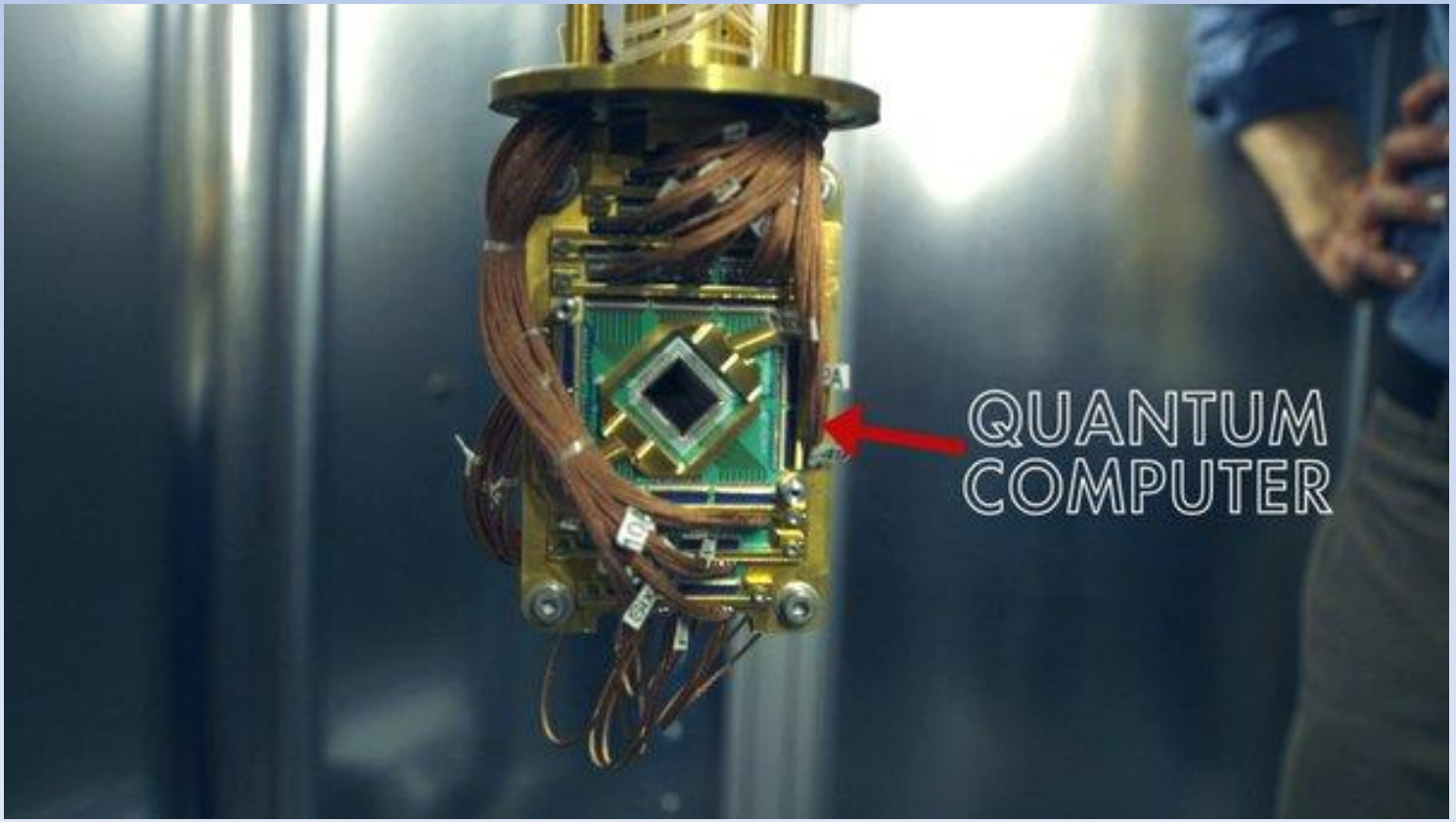
- Moore's Law states, that the number of transistors on a microprocessor double every 18 months.



- The year 2020 or 2030 will find the circuits on a microprocessor measured on an atomic scale.



- The logical next step will be to create quantum computers, which will harness the power of atoms and molecules to perform memory and processing tasks.



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- Benioff theorized about creating a quantum Turing machine.

Argonne National Laboratory campus

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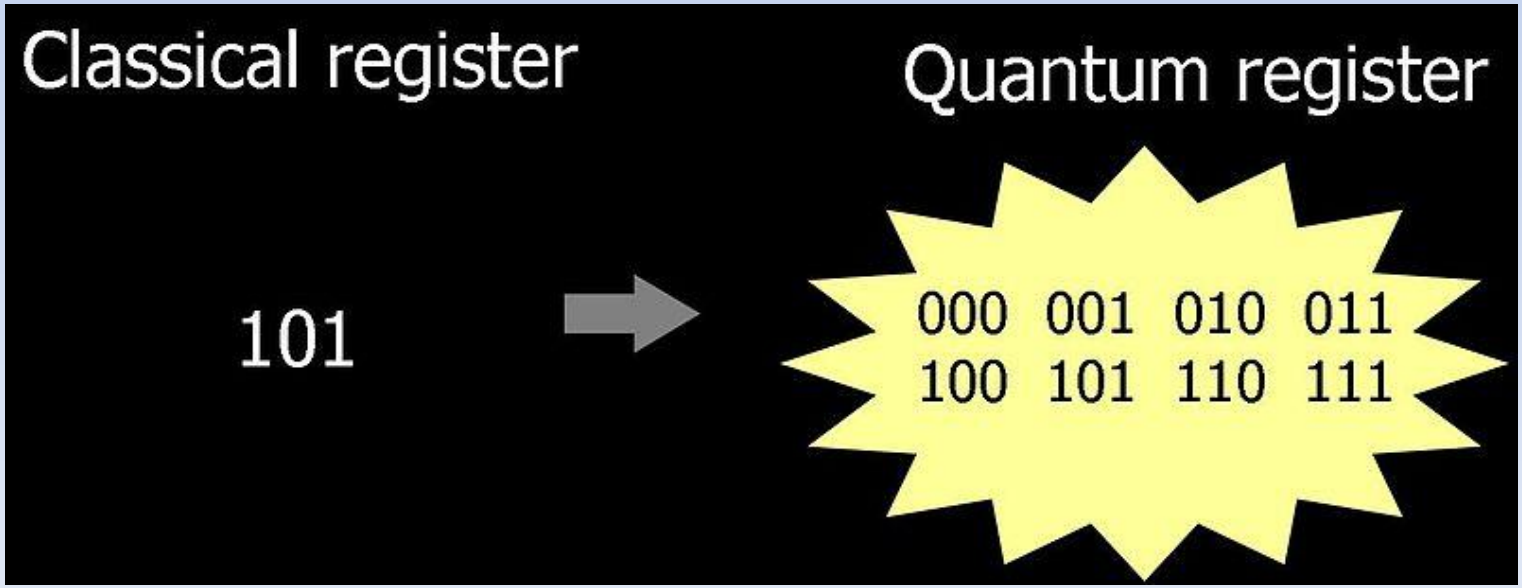
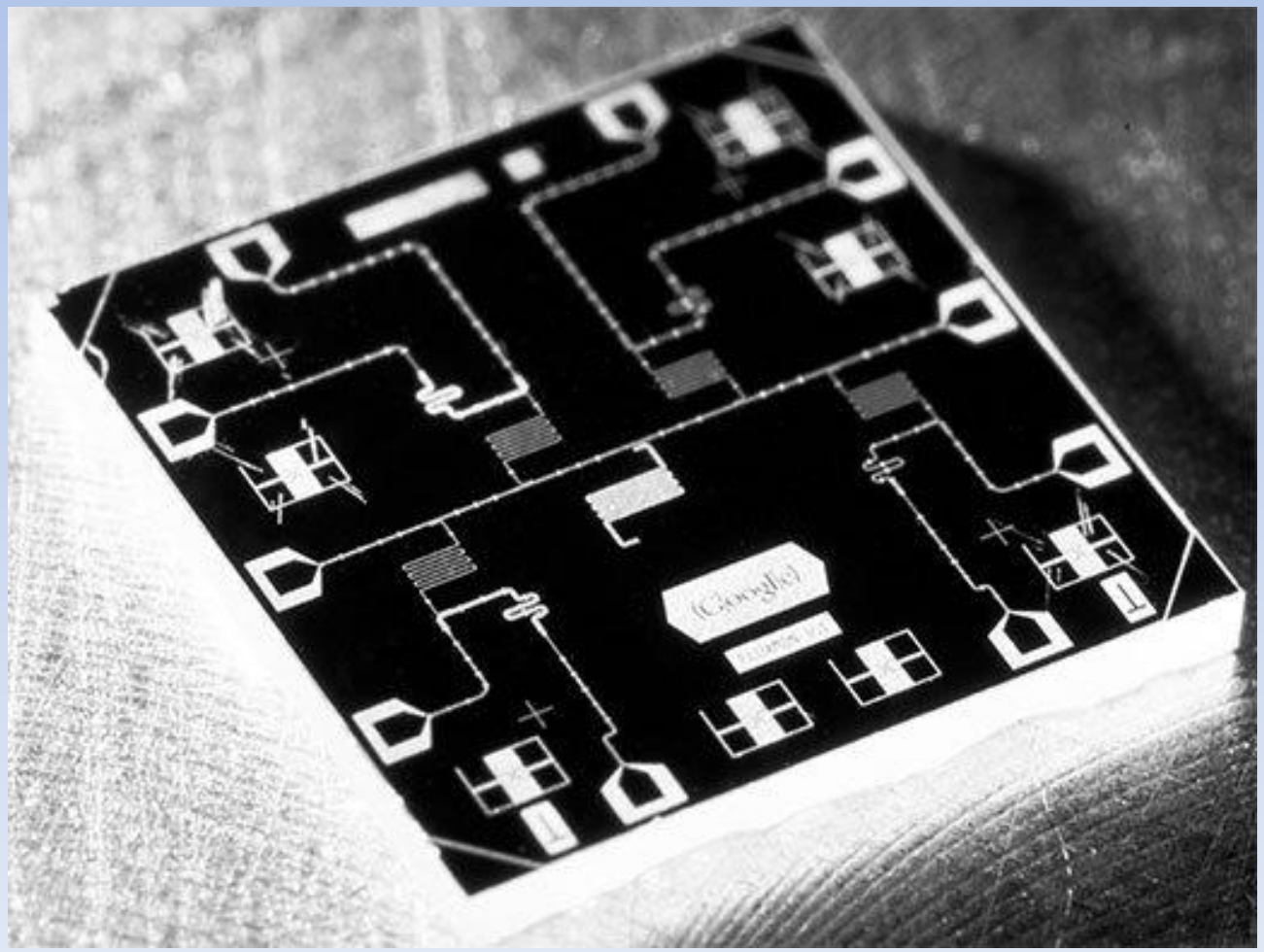


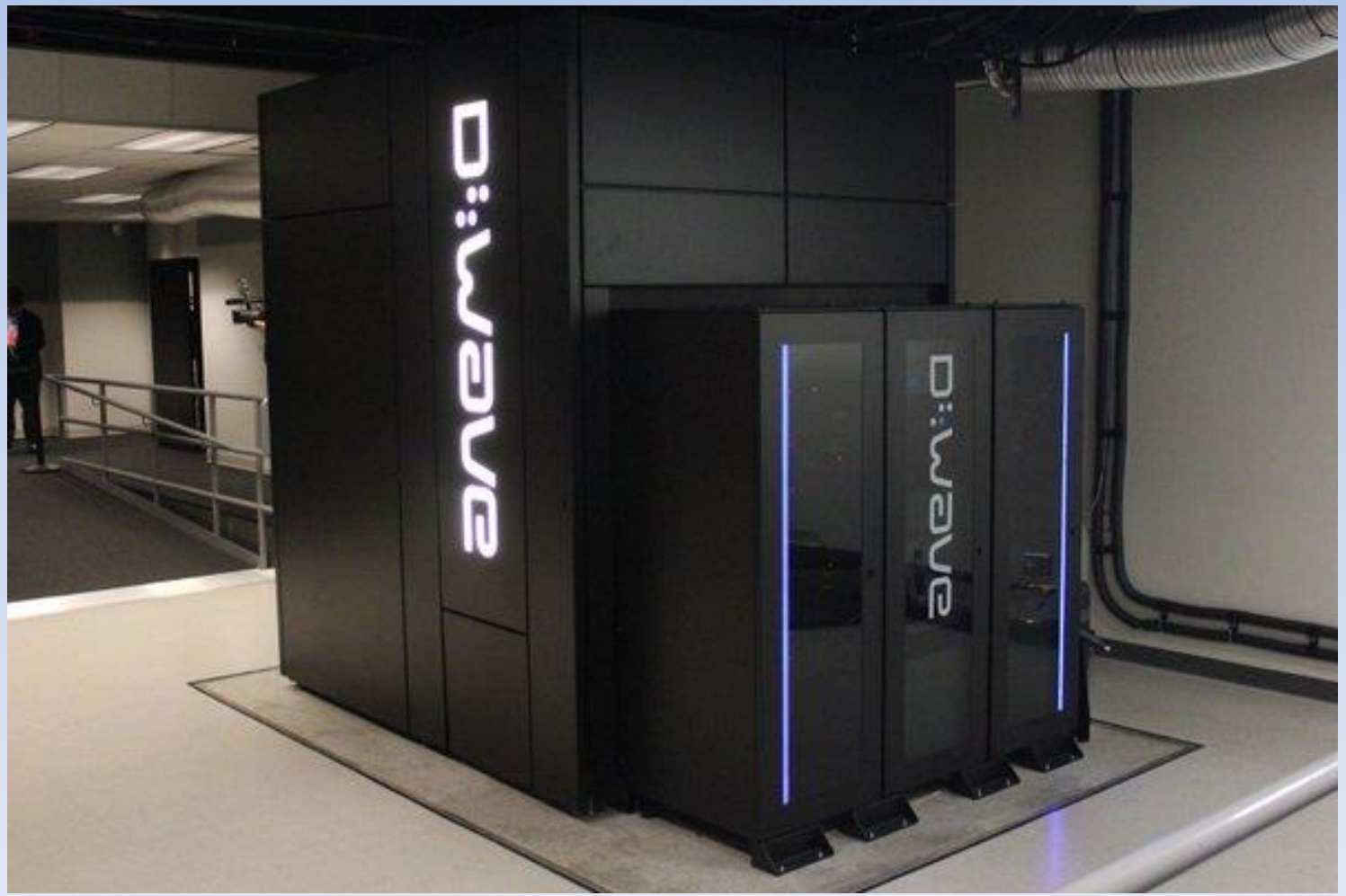
- This superposition of qubits is what gives quantum computers their inherent parallelism.
- This parallelism allows a quantum computer to work on a million computations at once, while desktop PC works on one.

Implementation

- Scientists have already built basic quantum computers that can perform certain calculations.



- At a NASA lab in Silicon Valley, Google is testing a D-Wave 2X quantum computer.

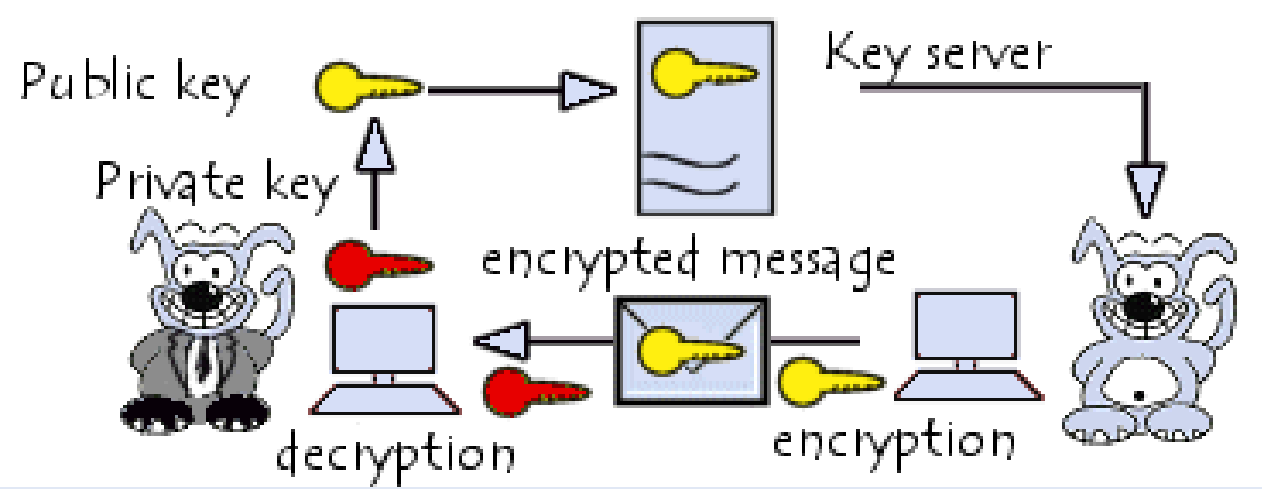


- In public-key cryptography, data is secured by math problems that are easy to solve, but hard to reverse engineer.
- While it is easy for a computer to multiply two prime numbers to produce a larger integer.

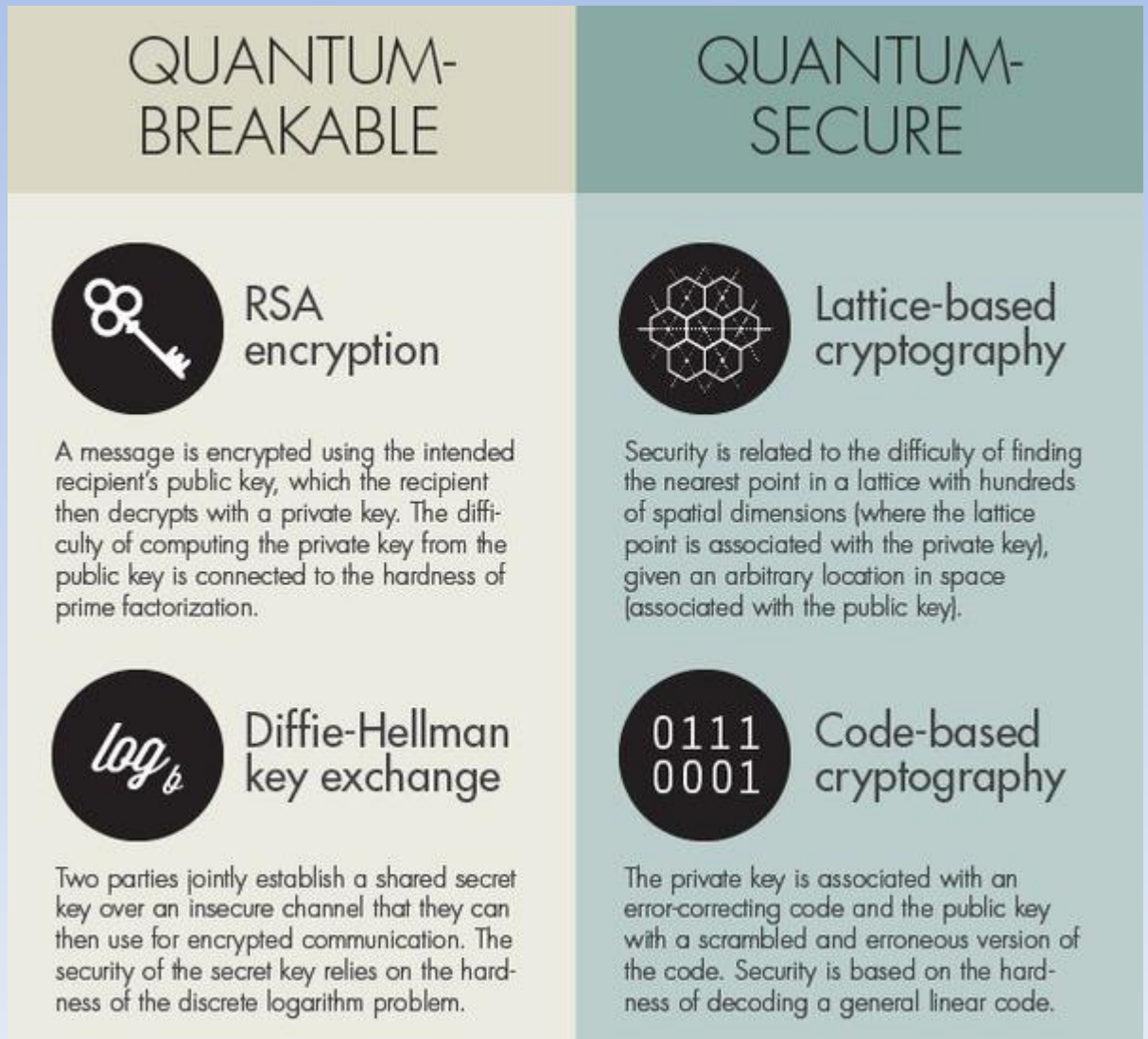
**34,141 x 81,749 = 2,790,992,609**

- It takes an impractically long time on a computer to factorize a large enough integer into its component primes.

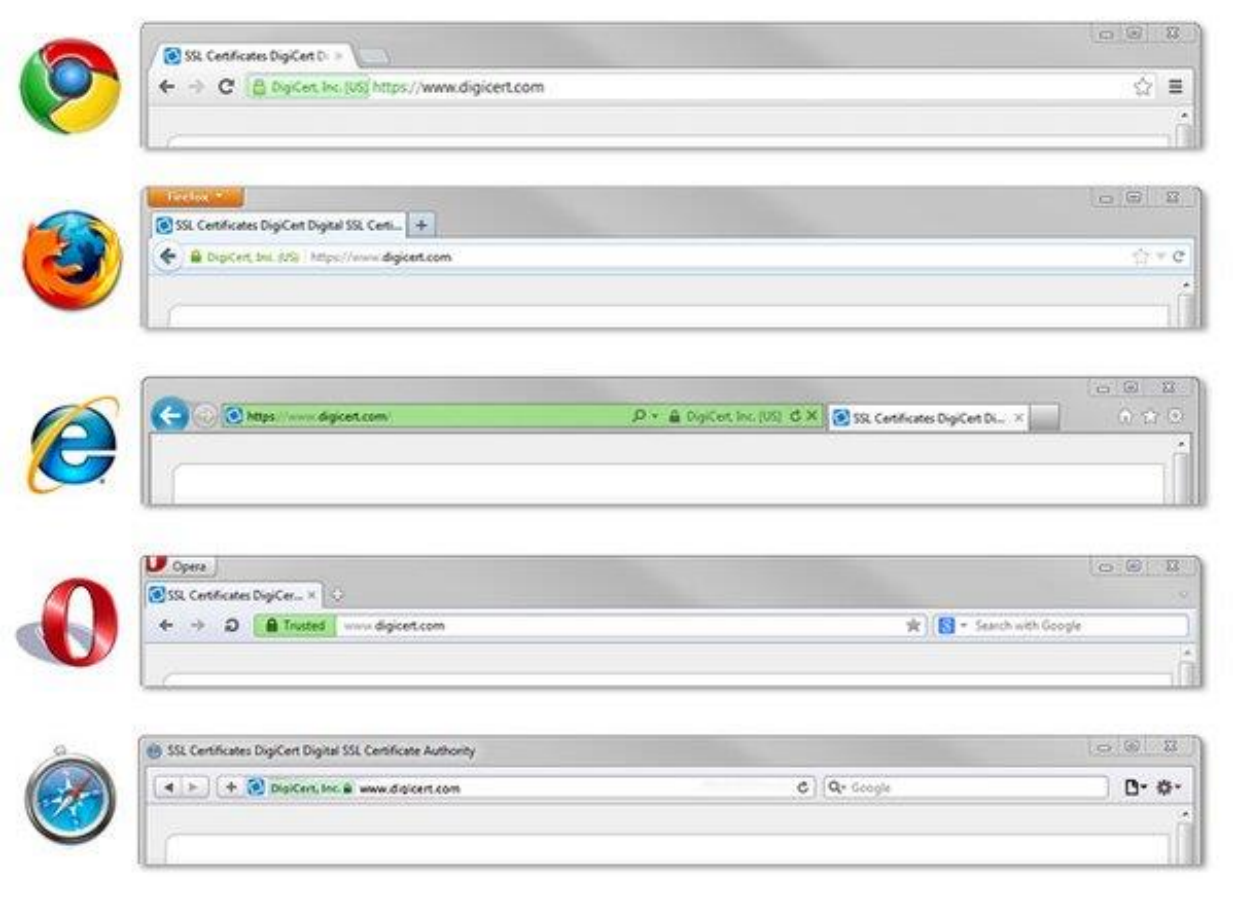
- In a crypto scheme based on prime factorization, the primes serve as a person's "private key," which is not shared.
- The product of the primes serves as the "public key," which is distributed publicly.
- When someone else uses the public key to encrypt a message, only the person in possession of the private key can decrypt it.



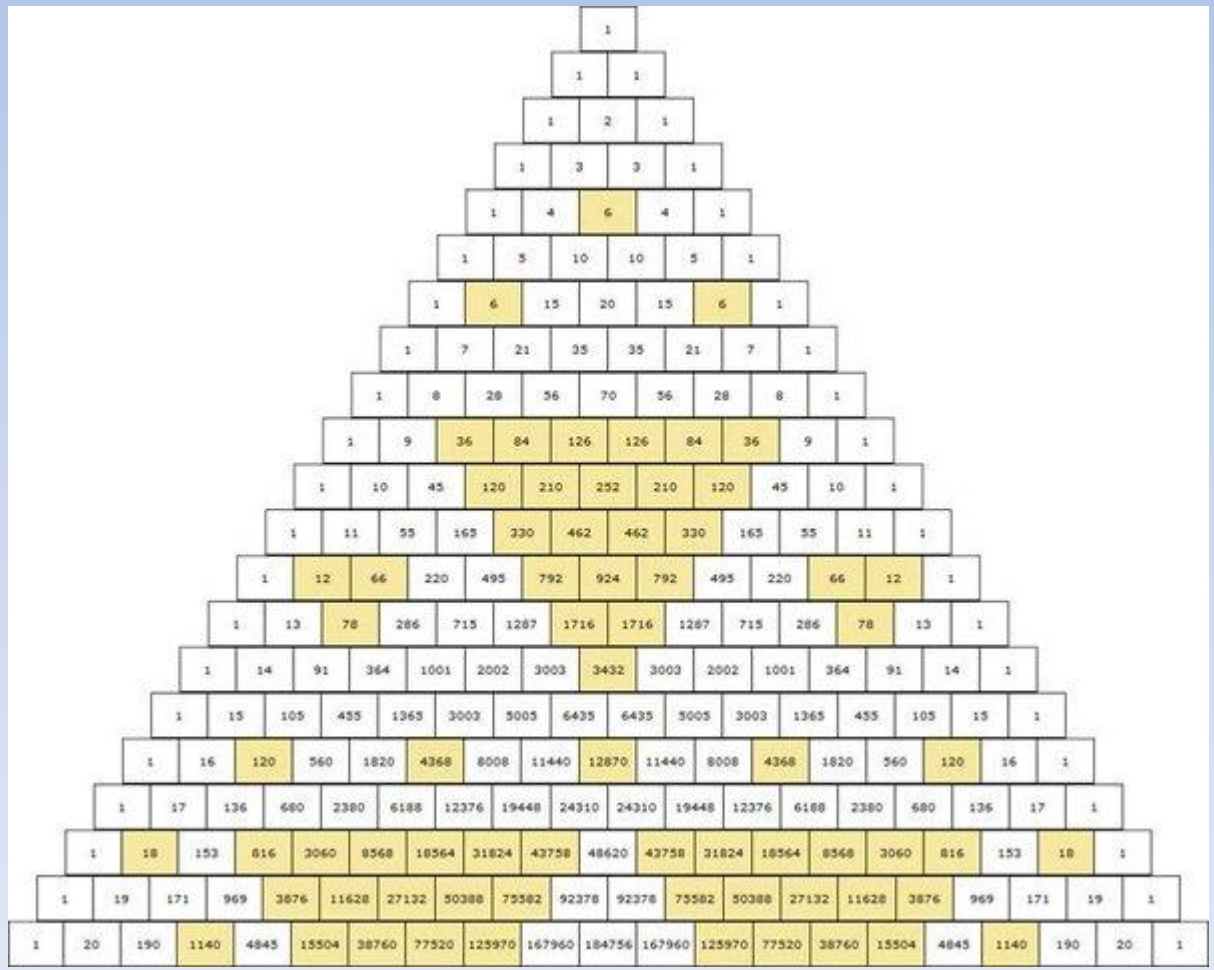
- Widely used today RSA and the Diffie-Hellman key exchange based on this principle.



- RSA(Rivest-Shamir-Adleman) algorithm is used in browsers which need to establish a secure connection.
- Every time you visit a website with a URL that begins “HTTPS,” that algorithm is used.



- A quantum computer could efficiently find prime factors for large integers.



- This ability would allow a quantum computer to decrypt many of the cryptographic systems in use today.

## Conclusion

- Quantum computing is still in early stages of development. But quantum computers will replace silicon chips in the future, just like the transistor once replaced the vacuum tube.

# 2.

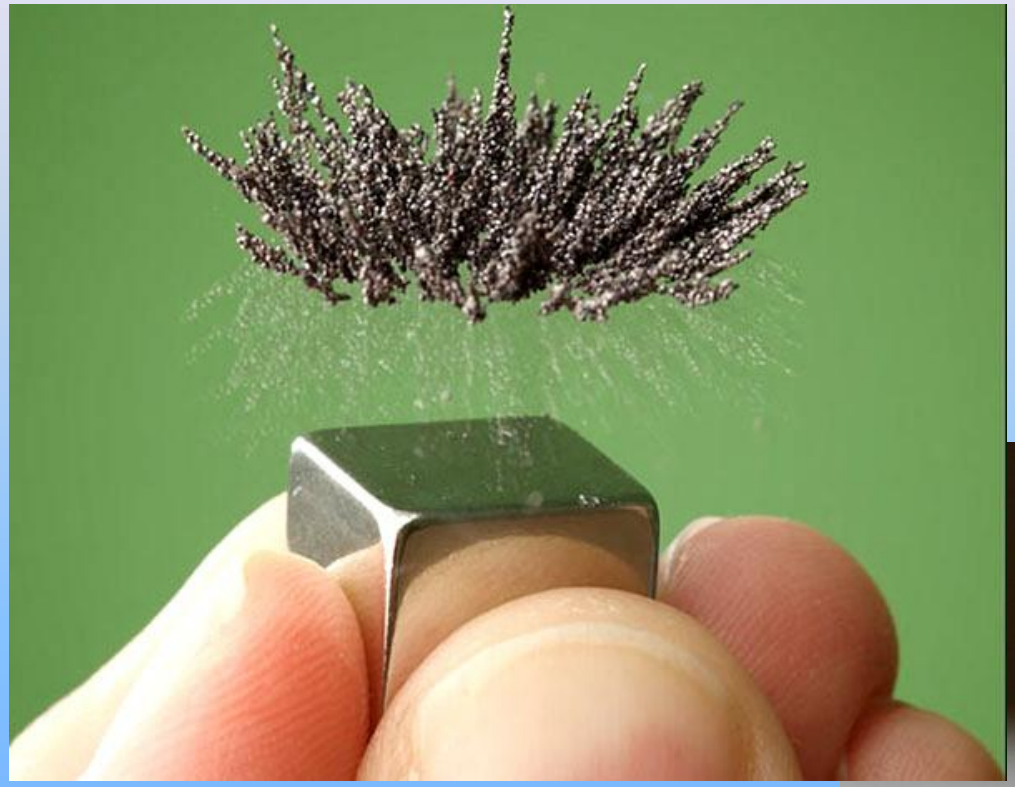
# Will the levitation become commonly used?

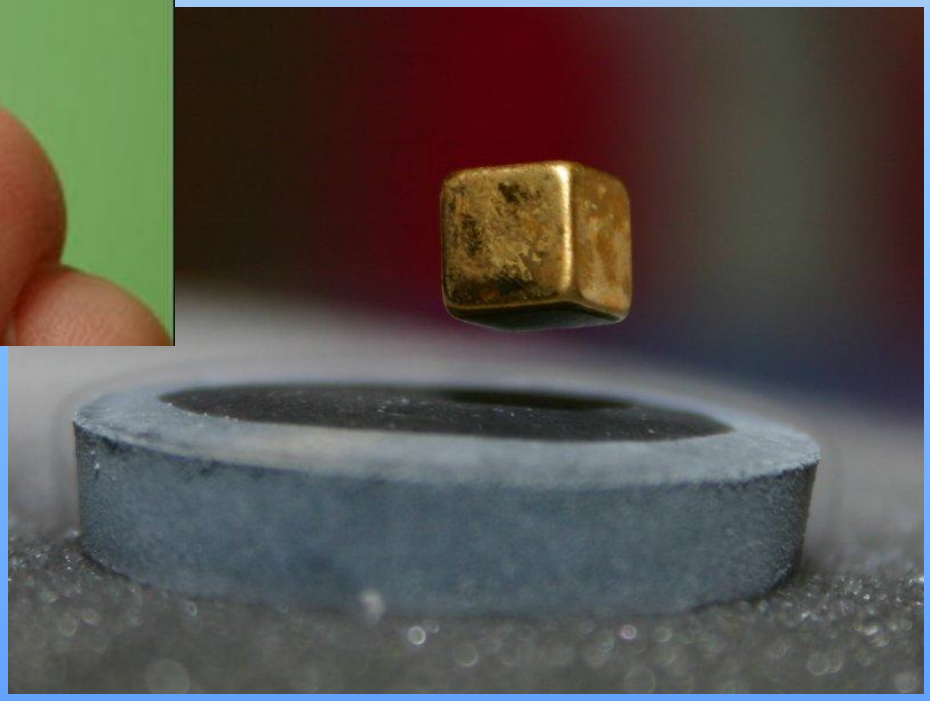
Raman Haivaronski AC-43I

**Levitation is the process by which an object is held aloft, without mechanical support, in a stable position.**

**There're a lot of types of levitation. For example, using diamagnetic levitation we can make the frogs fly. There are also such types of levitation such as acoustic levitation and optic levitation.**

**A cubical magnet levitating over a superconducting material (known as the Meissner effect),**

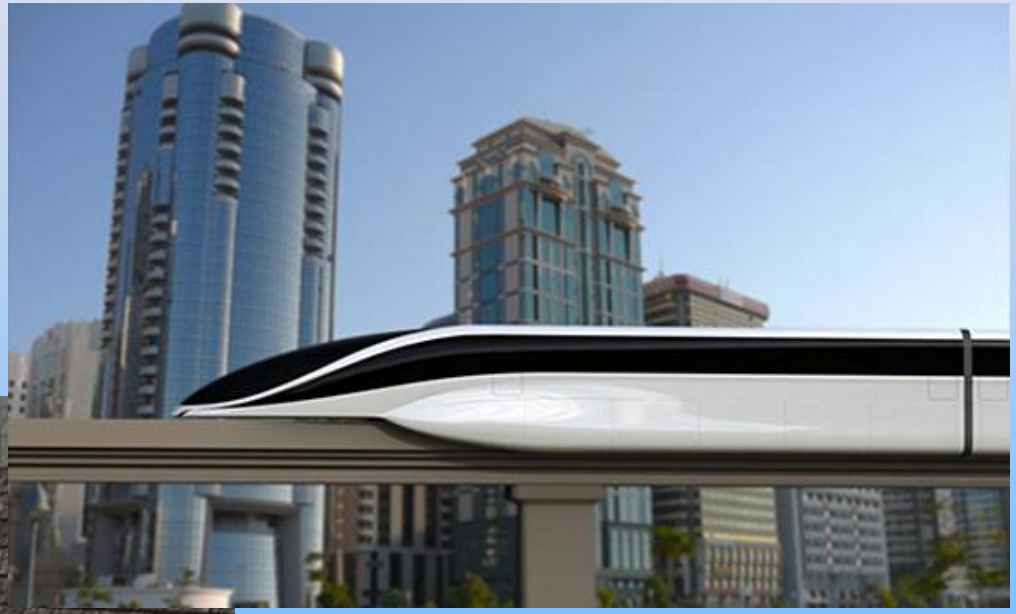




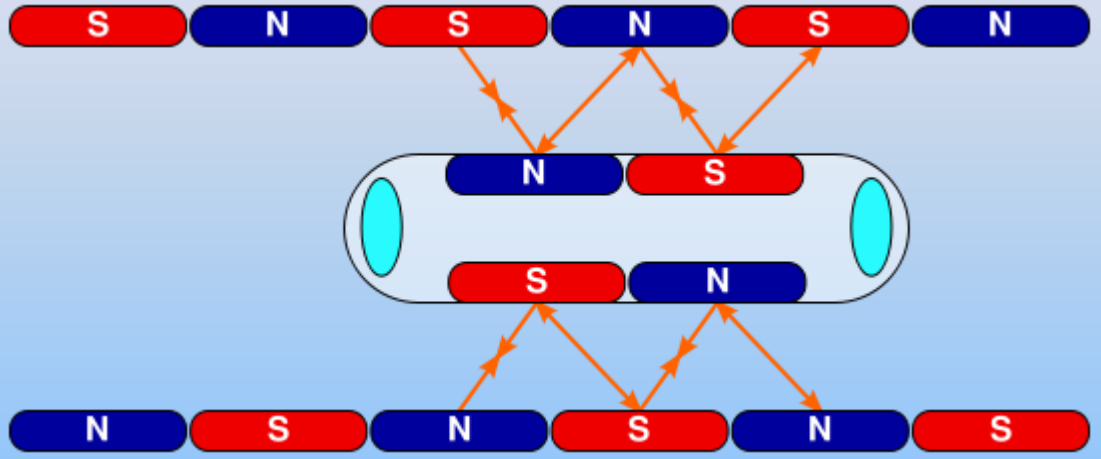

It seemed to be fantastic 20 years ago.

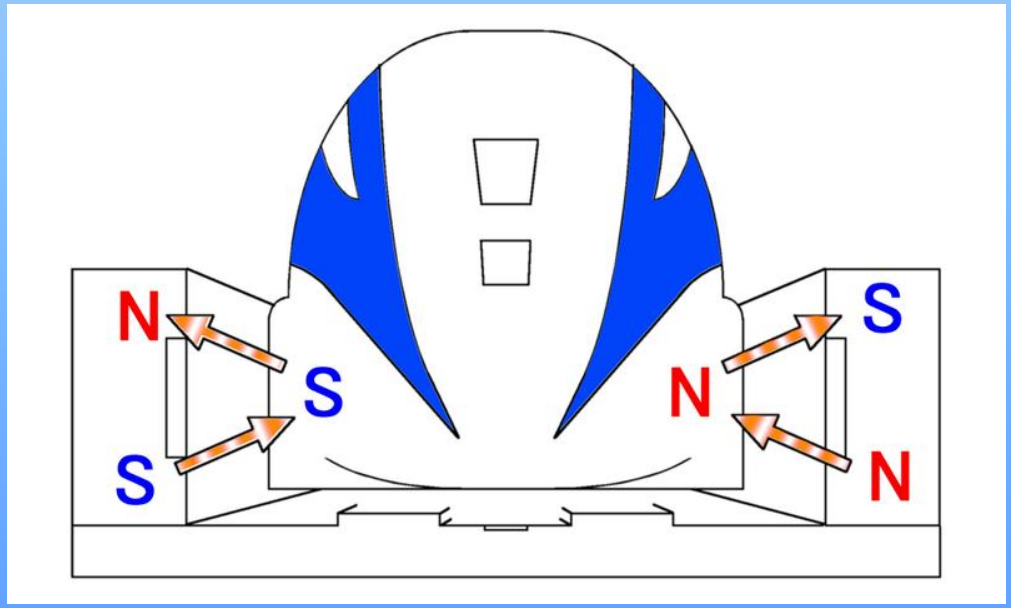
**But today it's a reality. As an example let’s take maglevs as one of the most useful inventions that use levitation.**


**Magnetic levitation is already actively used in transport systems of Japan, Germany, South Korea, China.**



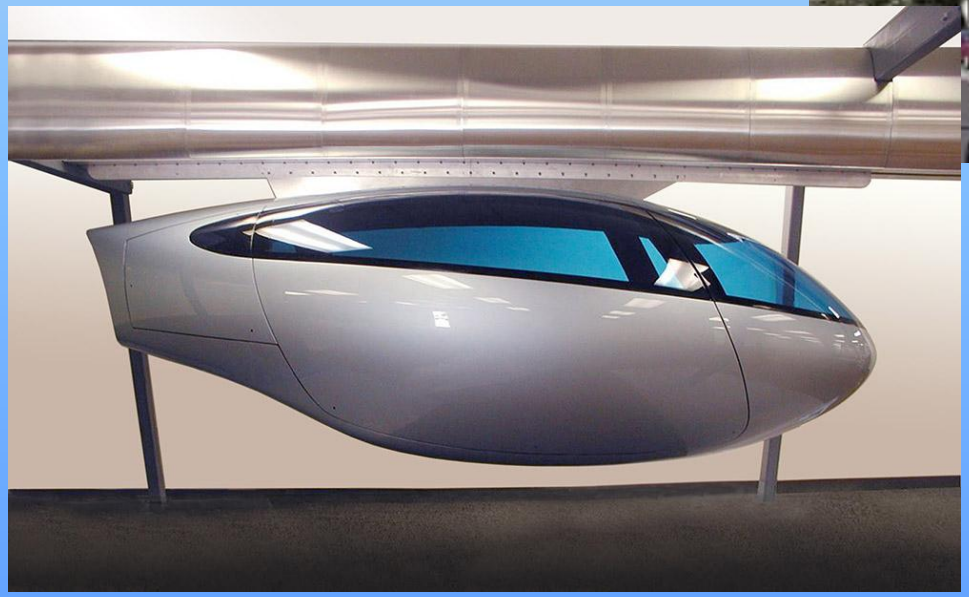
# The basic principle of magnetic poles attraction and repulsion is used.



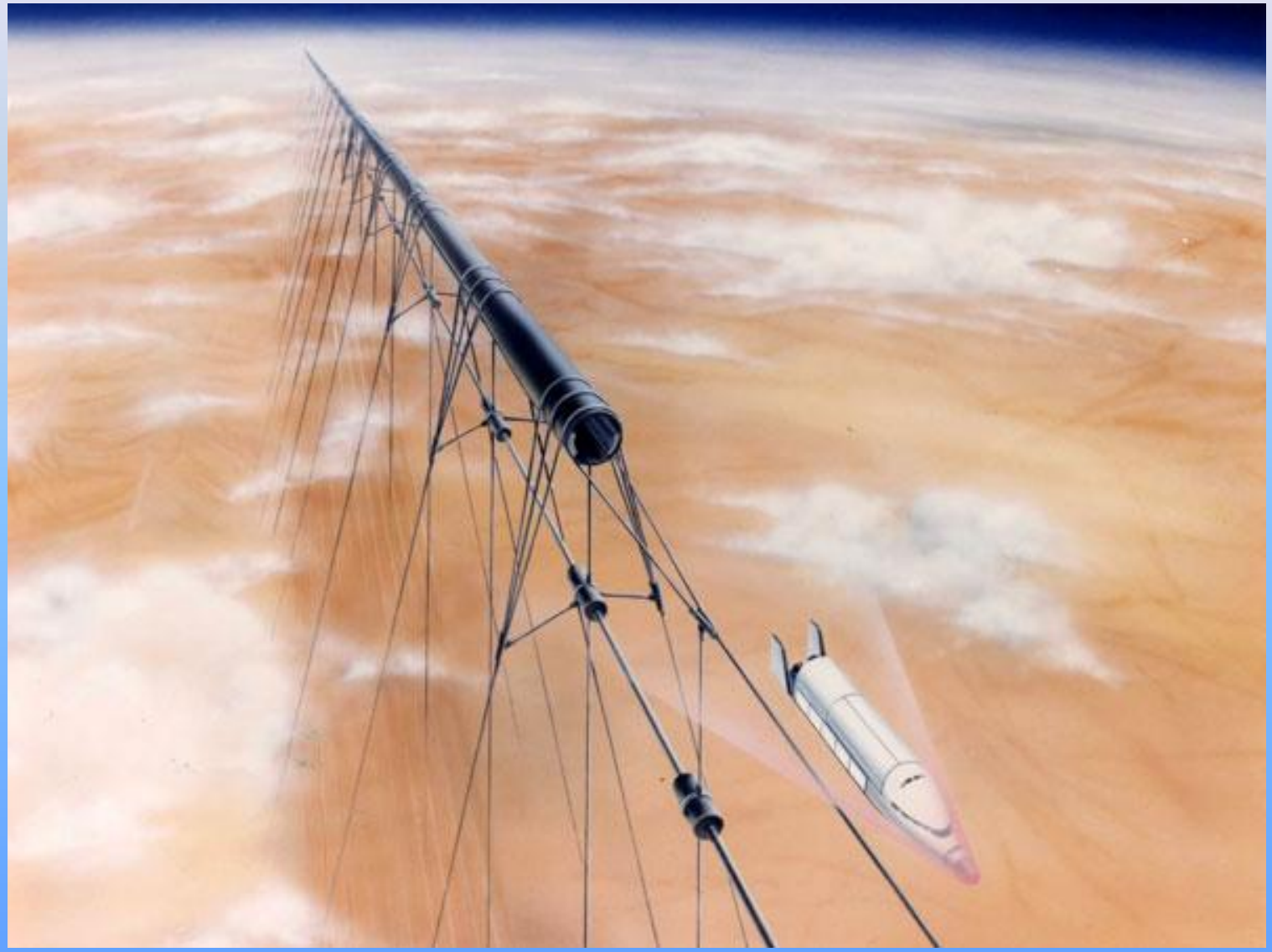
**SkyTran is a patented, high-speed, low-cost, elevated system created by NASA. The system is now being tested in Tel-Aviv, Israel.**

**skyTran moves passengers in a fast, green, and economical manner. skyTran would be made safer than driving by eliminating human error.**



**Magnetically levitated city is a concept of Chinese designer Wei Zhao of future human cities.**

**Maglev space launch system was researched by NASA but the cost of such track is too much ($20 billions).**



**That's how the magic of levitation is becoming a reality nowadays.**

**I want to conclude with an interesting fact: JR-Maglev MLX01 is the current Guinness record holder for train speed with the record of 603 km/h.**