

Development of technologies in war and conflict

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War is a common subject covered by media worldwide, often being portrayed as horrible tragedies caused by governmental disputes and political or religious ideology. But what is the pay off? And is there a different, much bigger picture than the needless deaths and acts of extreme inhumanity? This is what I will be discussing in this writing and planning an idealised space which can help people understand this bigger picture.

The aim of my project is to give people a new perspective on war. I wish to teach people to respect war as a process of learning about new technologies processes and how it allows us to develop ideas in a way which is totally unacceptable on a political and social level during peacetime rather than an exclusively terrible thing which should be persistently campaigned against in a naive attempt to fix something completely natural and might improve society and science on a number of fundamental levels. I will achieve this in the form of an exhibit which will remind or make people aware of where today's technologies have come from and how they were derived from tools of war.

The Jet Aircraft

The jet aircraft is a daily sight for most people, seeing passenger planes over head once or twice per hour. For some flying in one is a regular occurrence, a popular method of transport for covering hundreds or thousands in a matter of hours. This technology has helped connect the world in a way it never had been before when the fastest way of getting between countries was by prop airliners with limited range, speed and capacity or by passenger ships which could take days to cross the north Atlantic between European and North American ports which are the routes international business people needed to take to be able to coordinate their businesses between the two continents. This made business enterprises and many other things inefficient.

Upon the outbreak of world war 2, both axis and allied powers were working on developing more powerful engines to apply to their fighter aircraft to gain a technological advantage in their war efforts. The result of this were the first examples of jet engine's. The first to apply this effectively were the Germans with the creation of the Messerschmitt Me 262. The British, Soviets and the US quickly followed with the Gloster Meteor in 1944, Mig 9 in 1946 and the P80 Shooting Star also in 1946. The former Allies further developed these technologies after World War 2.



Gloster Meteor by RuthAS - Own work, CC BY 3.0,
<https://commons.wikimedia.org/w/index.php?curid=10377508>



Me262 by USAF museum -
<http://media.defense.gov/2005/Dec/22/2000574791/670/394/0/040820-F-1234P-081.JPG>,
Public Domain, <https://commons.wikimedia.org/w/index.php?curid=5066559>



P80 Shooting Star by USAF - U.S. Air Force photo, Public Domain,
<https://commons.wikimedia.org/w/index.php?curid=391769>



Mig9 Fargo by Mike1979 Russia - Own work, CC BY-SA 3.0,
<https://commons.wikimedia.org/w/index.php?curid=15509811>

These technologies were continually tested by both major western and communist powers right up until the end of the cold war in the late 80s. The jet fighter made its presence felt by enforcing air superiority in eastern Europe and eastern Asia.

In the mid to late 60s, the cold war was allowing easier mass development and production of different types of high powered jet engines, manufacturers were looking into ways of implementing it into commercial use. This would eventually lead to the creation of Concorde. Concorde flew its maiden flight in 1969 and its technology was heavily influenced by combat aircraft of the same era.



Pre-production variant of Concorde, 1971

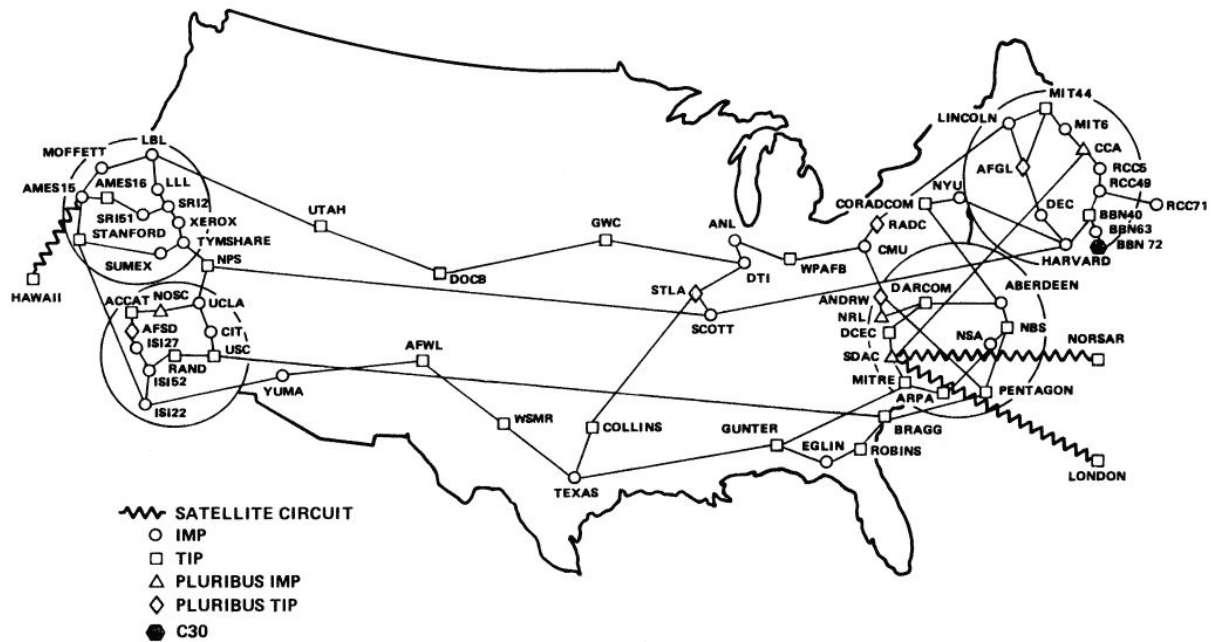
Source: independent.co.uk

The Internet

The second part of my exhibit is an homage to the origins of the internet. I felt this the most appropriate since it is possibly the single biggest thing to change lives worldwide since the 1950s.

For this, I start with probably the most significant precursor to the internet, the ARPANET. The ARPANET was a fairly simple, by today's standards, national network developed and used by the US. It was developed to be used by the US military in the event of a nuclear attack to coordinate a response like counterattacks and evacuations of possible targets. It was active from its establishment in 1969, at the height of the cold war, and was eventually decommissioned in 1990 due to outdated technology and better alternatives being available.

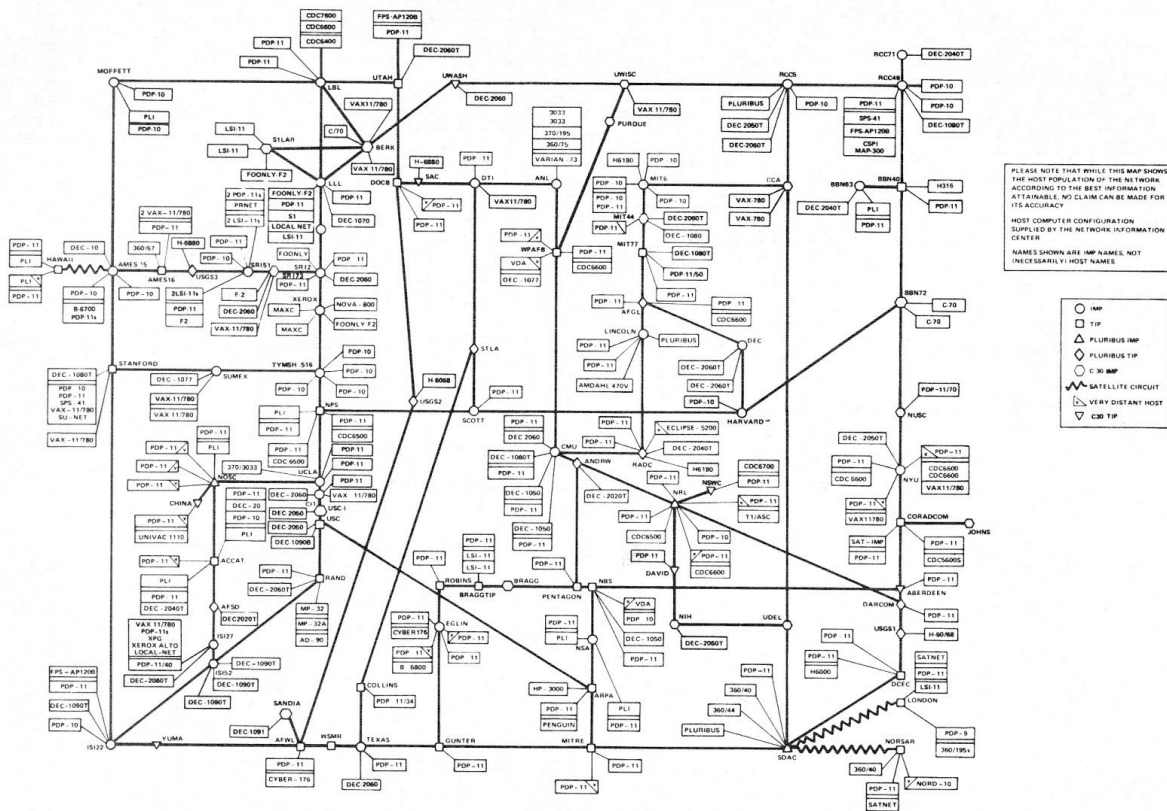
ARPANET GEOGRAPHIC MAP, OCTOBER 1980



(NOTE: THIS MAP DOES NOT SHOW ARPA'S EXPERIMENTAL SATELLITE CONNECTIONS)
 NAMES SHOWN ARE IMP NAMES, NOT (NECESSARILY) HOST NAMES

ARPANET as it existed in 1980, 10 years before its decommissioning
 (source:personalpages.manchester.ac.uk, 2004)

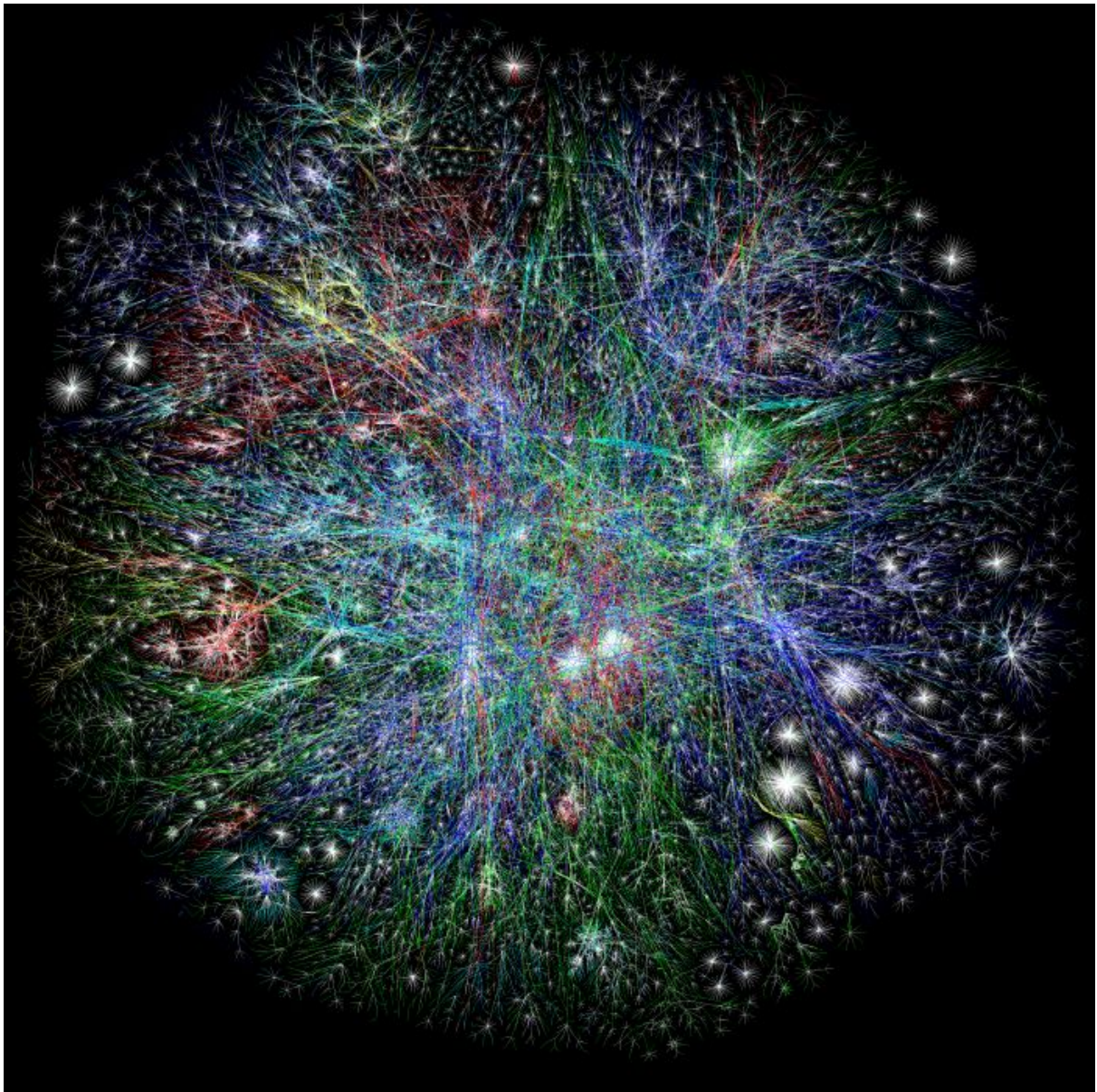
ARPANET LOGICAL MAP, DECEMBER 1981



ARPANET Logical map 1981
(Source: mercury.lcs.mit.edu)

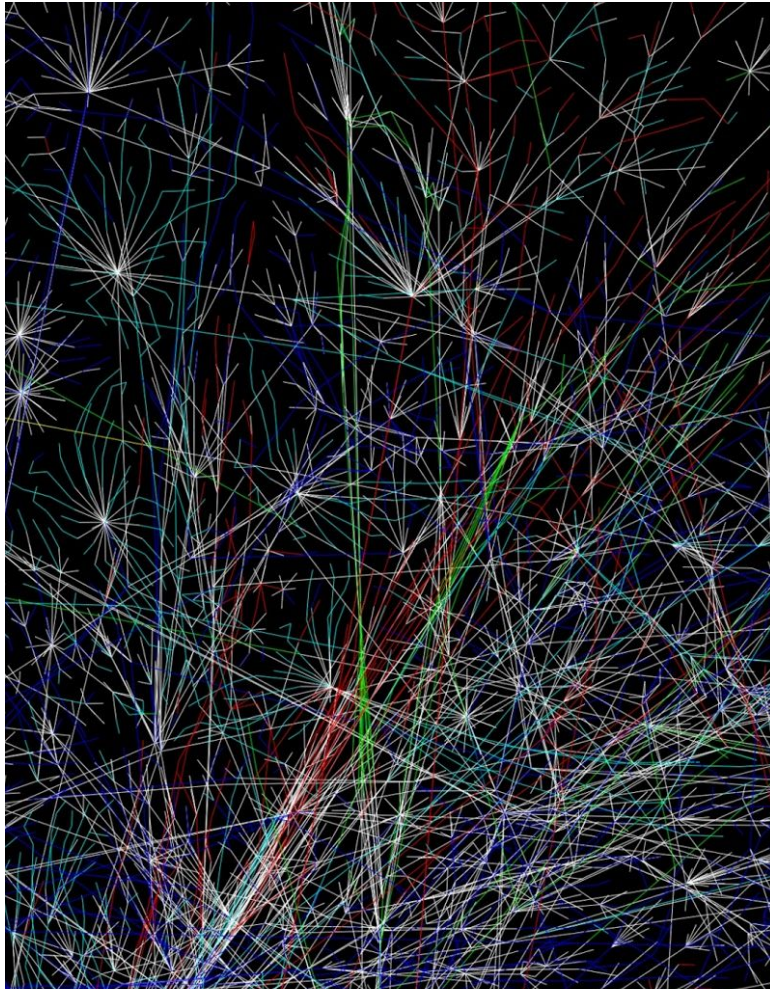
The 'intermediate' stages of the internet's development included many other government projects from a number of countries worldwide, the gradual implementation of a large satellite network and the exponential increase in host servers. Along with the technological developments, the idea that this network could be used to sell goods and services led to the vast increase in popularity and funding to develop the technologies which make the network function more efficiently.

The internet today is a technological marvel and the basis of many successful business enterprises and cause of a series of huge cultural swings which lead to the 'westernisation' of many countries and arguably the invention of the idea of 'westernisation' itself.



Example of work produced by the opte project, mapping a portion of the internet.
(source: opte.org, 2003)

The opte project was started in 2003 by a photography student by the name of Barrett Lyon. The aim of the project was to give people a better understanding of the depth and complexity of the internet, this was achieved by mapping portions of the internet using specialised algorithms



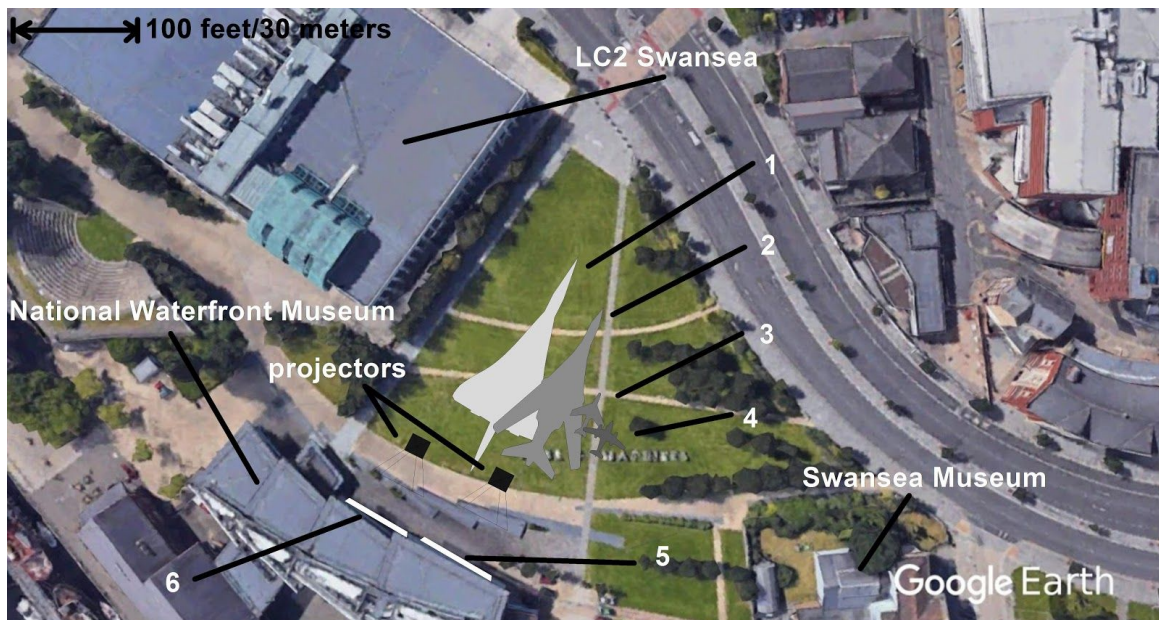
For the sake of comprehension, the above image is a section of the first image zoomed in roughly 60 times.

The Exhibit

The space should effectively express the importance of the technologies discussed here and make their predecessors and the reasons why they were developed in the first place apparent.

The exhibit will be held in Swansea next to the Swansea maritime quarter and Swansea museum. It will be an outdoor event in which the importance of the history of the technologies discussed will be expressed through use of physical artefacts and large projections

Map projection of exhibit space



(to scale, map courtesy of Google Earth)

Models (Scale 1:1):

1: Concorde - famous Jet powered passenger airliner in period correct colouring



(klassiker-der-luftfahrt.de)

2: B1 Lancer - Renowned long range Jet bomber



(Source: flickr.com) location: Layton, Utah

3: Hawker Hunter - Infamous British Jet fighter in RAF colours



(source: flying-tigers.co.uk)

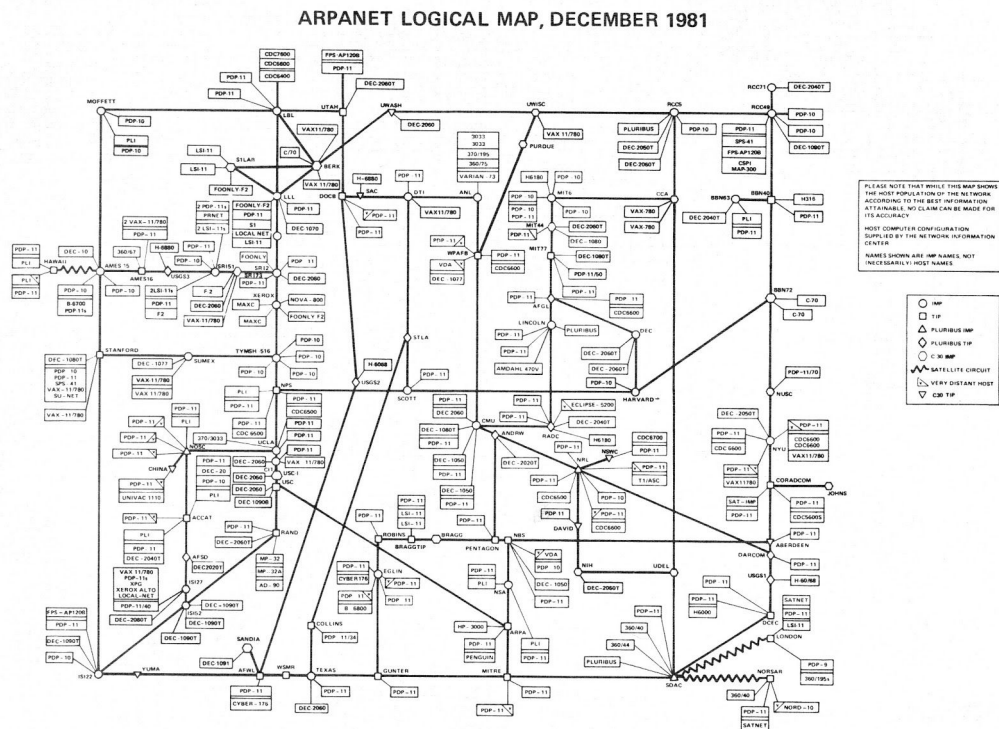
4: Messerschmitt Me262 - first combat jet fighter in Luftwaffe colours



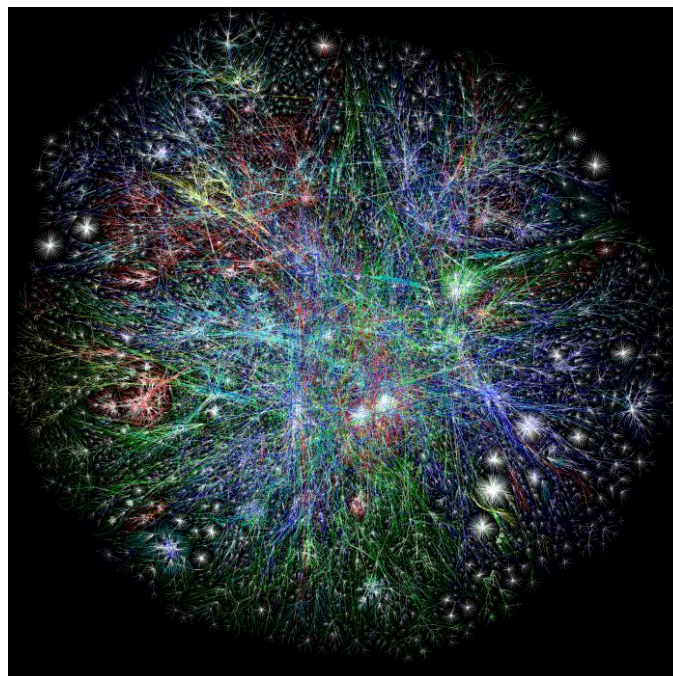
(Source: acesflyinghigh.wordpress.com)

Projections

5: APRANET - Technological basis for the internet



6: 2003 Opte snapshot - Visualising today's internet



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<http://www.blyon.com/blyon-cdn/1069646562.2D.9000x9000.png>.