IP: 1

Grigorovich IP-1

The Grigorovich IP-1 (for ??????????? ????????

"Cannon fighter") was a fighter aircraft produced in the Soviet Union in the 1930s by the Grigorovich - The Grigorovich IP-1 (for ??????????? ???????? - "Cannon fighter") was a fighter aircraft produced in the Soviet Union in the 1930s by the Grigorovich Design Bureau.

The IP-1 started development as the GD-52 in 1934. An all-metal aircraft, it featured an open cockpit, retractable wing wheels, an advanced, nearly-elliptical cantilever wing, and a variable-pitch, metal propeller powered by a 640 hp (477 kW) Wright Cyclone series engine. Retractable skis could be fitted for winter use, a first for any Soviet aircraft. The DG-52 was transferred to the Air Force Research Institute on 12 January, 1935 for testing, and was flown that same day by P.Ya. Fedrovi.

Like the preceding Grigorovich I-Z, the IP-1 prototype was built around the cannon-fighter concept, with two Leonid Kurchevsky-designed APK-4 76.2mm cannons mounted under the wings, each capable of 5 shots before ammunition was depleted. It was also armed with two 7.62mm machine guns. Production aircraft used the licensed copy of the Wright Cyclone, the Shvetsov M-25. After 90 aircraft had been produced and 30 delivered, it became apparent that there were issues with lateral stability and especially spin. On 3 June, 1936 Lieutenant Bolshakov of the 92nd Air Brigade fell into a flat tailspin at 1,700m, and had to bail out with a parachute. This led to further refinements to the structure. On 3 May 1936 it was decided to replace the APK-4 cannons with two 20mm ShVAK cannons. Six 7.62mm ShKAS machine guns were installed, three in each wing. 200 units were produced from 1936 to 1937, but the IP-1 was soon overshadowed by the Polikarpov I-16.

On 1 February, 1940 six IP-1s were in service at the ShMAS Air Force in the Moscow Military District, and eight at the Air Force Control Center, though the latter had been dismantled for use as spare parts. In October 1940 the 21 remaining aircraft were written off as unusable.

Euler's identity

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In mathematics, Euler's identity (also known as Euler's equation) is the equality

e

i

?

+

1

=

0

{\displaystyle e^{i\pi }+1=0}

where

e

{\displaystyle e}

is Euler's number, the base of natural logarithms,

i

{\displaystyle i}

is the imaginary unit, which by definition satisfies

i

2

=

?

1

{\displaystyle i^{2}=-1}

, and

?

{\displaystyle \pi }

is pi, the ratio of the circumference of a circle to its diameter.

Euler's identity is named after the Swiss mathematician Leonhard Euler. It is a special case of Euler's formula

e

i

x

=

cos

?

x

+

i

sin

?

x

{\displaystyle e^{ix}=\cos x+i\sin x}

when evaluated for

x

=

?

{\displaystyle x=\pi }

. Euler's identity is considered an exemplar of mathematical beauty, as it shows a profound connection between the most fundamental numbers in mathematics. In addition, it is directly used in a proof that ? is transcendental, which implies the impossibility of squaring the circle.

IP address

An Internet Protocol address (IP address) is a numerical label such as 192.0.2.1 that is assigned to a device connected to a computer network that uses

An Internet Protocol address (IP address) is a numerical label such as 192.0.2.1 that is assigned to a device connected to a computer network that uses the Internet Protocol for communication. IP addresses serve two main functions: network interface identification, and location addressing.

Internet Protocol version 4 (IPv4) was the first standalone specification for the IP address, and has been in use since 1983. IPv4 addresses are defined as a 32-bit number, which became too small to provide enough addresses as the internet grew, leading to IPv4 address exhaustion over the 2010s. Its designated successor, IPv6, uses 128 bits for the IP address, giving it a larger address space. Although IPv6 deployment has been ongoing since the mid-2000s, both IPv4 and IPv6 are still used side-by-side as of 2025.

IP addresses are usually displayed in a human-readable notation, but systems may use them in various different computer number formats. CIDR notation can also be used to designate how much of the address should be treated as a routing prefix. For example, 192.0.2.1/24 indicates that 24 significant bits of the address are the prefix, with the remaining 8 bits used for host addressing. This is equivalent to the historically used subnet mask (in this case, 255.255.255.0).

The IP address space is managed globally by the Internet Assigned Numbers Authority (IANA) and the five regional Internet registries (RIRs). IANA assigns blocks of IP addresses to the RIRs, which are responsible for distributing them to local Internet registries in their region such as internet service providers (ISPs) and large institutions. Some addresses are reserved for private networks and are not globally unique.

Within a network, the network administrator assigns an IP address to each device. Such assignments may be on a static (fixed or permanent) or dynamic basis, depending on network practices and software features. Some jurisdictions consider IP addresses to be personal data.

IP in IP

IP in IP is an IP tunneling protocol that encapsulates one IP packet in another IP packet. To encapsulate an IP packet in another IP packet, an outer header

IP in IP is an IP tunneling protocol that encapsulates one IP packet in another IP packet. To encapsulate an IP packet in another IP packet, an outer header is added with Source IP, the entry point of the tunnel, and Destination IP, the exit point of the tunnel. While doing this, the inner packet is unmodified (except the TTL field, which is decremented). The Don't Fragment and the Type Of Service fields should be copied to the outer packet. If the packet size, including the outer header, is greater than the Path MTU, the encapsulator fragments the packet. The decapsulator will reassemble the packet.

Ip Man

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Ip Man (born Ip Kai-man; 1 October 1893 – 2 December 1972), also known as Yip Man, was a Chinese martial arts grandmaster. He became a teacher of the martial art of Wing Chun when he was 20. He had several students who later became martial arts masters in their own right, the most famous among them being Bruce Lee.

Internet protocol suite

The Internet protocol suite, commonly known as TCP/IP, is a framework for organizing the communication protocols used in the Internet and similar computer

The Internet protocol suite, commonly known as TCP/IP, is a framework for organizing the communication protocols used in the Internet and similar computer networks according to functional criteria. The foundational protocols in the suite are the Transmission Control Protocol (TCP), the User Datagram Protocol (UDP), and the Internet Protocol (IP). Early versions of this networking model were known as the Department of Defense (DoD) Internet Architecture Model because the research and development were funded by the Defense Advanced Research Projects Agency (DARPA) of the United States Department of Defense.

The Internet protocol suite provides end-to-end data communication specifying how data should be packetized, addressed, transmitted, routed, and received. This functionality is organized into four abstraction layers, which classify all related protocols according to each protocol's scope of networking. An implementation of the layers for a particular application forms a protocol stack. From lowest to highest, the layers are the link layer, containing communication methods for data that remains within a single network segment (link); the internet layer, providing internetworking between independent networks; the transport layer, handling host-to-host communication; and the application layer, providing process-to-process data exchange for applications.

The technical standards underlying the Internet protocol suite and its constituent protocols are maintained by the Internet Engineering Task Force (IETF). The Internet protocol suite predates the OSI model, a more comprehensive reference framework for general networking systems.

Ip Man (film series)

progenitor of the series was Ip Man (2008), which was followed by three sequels: Ip Man 2 (2010), Ip Man 3 (2015), and Ip Man 4: The Finale (2019), as

Ip Man is a series of Hong Kong martial arts films loosely based on the life events of the Wing Chun master of the same name. The progenitor of the series was Ip Man (2008), which was followed by three sequels: Ip Man 2 (2010), Ip Man 3 (2015), and Ip Man 4: The Finale (2019), as well as the spin-off Master Z: Ip Man Legacy (2018). All four main films were directed by Wilson Yip, written by Edmond Wong, produced by Raymond Wong, and starred Donnie Yen as the titular character. Mandarin Films released the first two films in Hong Kong, which earned more than $37 million with a budget of around $24.6 million. As of 2023, the

four main films and the spin-off have grossed $426.2 million worldwide combined.

Donnie Yen has mentioned that each film has a unique theme: the first Ip Man film is about "survival", Ip Man 2 focuses on "making a living and adaptation", and Ip Man 3 focuses on "life" itself. The fourth film was originally announced to be the last film in the main series and concludes with the death of Ip Man; however a fifth film was announced in May 2023.

IP over Avian Carriers

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In computer networking, IP over Avian Carriers (IPoAC) is a humorous but ostensibly functional proposal to carry Internet Protocol (IP) traffic by birds such as homing pigeons. IP over Avian Carriers was initially described in RFC 1149 issued by the Internet Engineering Task Force, written by David Waitzman, and released on April 1, 1990. It is one of several April Fools' Day Request for Comments.

Waitzman described an improvement of his protocol in RFC 2549, IP over Avian Carriers with Quality of Service (1 April 1999). Later, in RFC 6214—released on 1 April 2011, and 13 years after the introduction of IPv6—Brian Carpenter and Robert Hinden published Adaptation of RFC 1149 for IPv6.

IPoAC has been successfully implemented, but for only nine packets of data, with a packet loss ratio of 55% (due to operator error), and a response time ranging from 3,000 seconds (50 min) to over 6,000 seconds (100 min). Thus, this technology suffers from extremely high latency.

Glucagon-like peptide-1

glucagon, intervening peptide-1 (IP-1) and major proglucagon fragment (MPGF). In the gut and brain, proglucagon is catalysed by PC 1/3 giving rise to glicentin

Glucagon-like peptide-1 (GLP-1) is a 30- or 31-amino-acid-long peptide hormone deriving from tissue-specific posttranslational processing of the proglucagon peptide. It is produced and secreted by intestinal enteroendocrine L-cells and certain neurons within the nucleus of the solitary tract in the brainstem upon food consumption. The initial product GLP-1 (1–37) is susceptible to amidation and proteolytic cleavage, which gives rise to the two truncated and equipotent biologically active forms, GLP-1 (7–36) amide and GLP-1 (7–37). Active GLP-1 protein secondary structure includes two ?-helices from amino acid position 13–20 and 24–35 separated by a linker region.

Alongside glucose-dependent insulinotropic peptide (GIP), GLP-1 is an incretin; thus, it has the ability to decrease blood sugar levels in a glucose-dependent manner by enhancing the secretion of insulin. Beside the insulinotropic effects, GLP-1 has been associated with numerous regulatory and protective effects. Unlike GIP, the action of GLP-1 is preserved in patients with type 2 diabetes. Glucagon-like peptide-1 receptor agonists gained approval as drugs to treat diabetes and obesity starting in the 2000s.

Endogenous GLP-1 is rapidly degraded primarily by dipeptidyl peptidase-4 (DPP-4), as well as neutral endopeptidase 24.11 (NEP 24.11) and renal clearance, resulting in a half-life of approximately 2 minutes. Consequently, only 10–15% of GLP-1 reaches circulation intact, leading to fasting plasma levels of only 0–15 pmol/L. To overcome this, GLP-1 receptor agonists and DPP-4 inhibitors have been developed to increase GLP-1 activity. As opposed to common treatment agents such as insulin and sulphonylureas, GLP-1-based treatment has been associated with weight loss and a lower risk of hypoglycemia, two important considerations for patients with type 2 diabetes.

LSZ reduction formula

\mathrm {d} ^{4}x_{1}(\partial _{0}\mathrm {e} ^{ip_{1}\cdot x_{1}}\eta (x_{1})+\mathrm {e} ^{ip_{1}\cdot x_{1}}\partial _{0}\eta (x_{1}){\big)}\gamma ^{0}u_{{\textbf

In quantum field theory, the Lehmann–Symanzik–Zimmermann (LSZ) reduction formula is a method to calculate S-matrix elements (the scattering amplitudes) from the time-ordered correlation functions of a quantum field theory. It is a step of the path that starts from the Lagrangian of some quantum field theory and leads to prediction of measurable quantities. It is named after the three German physicists Harry Lehmann, Kurt Symanzik and Wolfhart Zimmermann.

Although the LSZ reduction formula cannot handle bound states, massless particles and topological solitons, it can be generalized to cover bound states, by use of composite fields which are often nonlocal. Furthermore, the method, or variants thereof, have turned out to be also fruitful in other fields of theoretical physics. For example, in statistical physics they can be used to get a particularly general formulation of the fluctuation-dissipation theorem.