

FIFTH GENERATION—ARTICLES AND WEBLINKS

WEBLINKS: A FIFTH GENERATION—PLATFORM—AIR FORCE—AIR WARFARE

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FIFTH GEN AF CAF-SPEECH

[A 5TH-GENERATION AIR FORCE – CAF SPEECH 11 MAY 2017](#)

This from CAF's speech.

We believe we coined the term '5th-generation Air Force' in our recently released Air Force Strategy. We defined the concept as: ... a fully networked and integrated Air Force that exploits the combat-multiplier effects of a readily-available, integrated and shared battlespace picture to deliver lethal and non-lethal air power for joint Australian Defence Force, allied and coalition operations.¹ [Air Force Strategy 2017-2027](#)

Note CAF's conclusion: Australia's 5th-generation Air Force is a game-changer for the Australian Defence Force and, by extension, our regional partners. 2. We now want to work with you in force-design, to generate those advanced and complex systems which can be scaled for all levels of security. 3. In attempting to change the game, we want to work to a single line of effort with all US services to shape our region in ways that reflect our global preferences. 4. Finally, 5th-generation Air Force can, and should be, a bridge for regional and global engagement.

FIFTH GEN AIR FORCE STRATEGY 2017-2027

Air Force's strategy for 2017-2027 is based around the following five key themes known as vectors:

1. Joint Warfighting Capability
2. People Capability
3. Communication and Information Systems
4. Infrastructure
5. International Engagement

These vectors describe how Air Force will transform itself to a fifth-generation force over the next ten years. With this goal in mind, this strategy is primarily, but not exclusively, aimed at Air Force decision-makers.

[AIR FORCE STRATEGY 2017-2027](#)

DEFINITION FIFTH GEN AF APDC 5TH-GENERATION AIR FORCE

[APDC APR 2016 5TH-GENERATION AIR FORCE](#)

Key Points

- Air Force has evolved through a series of technology-driven step changes in capability.
- The 5th-generation Air Force will deliver a new level of capability through the ability to produce a synthesised appreciation of the battlespace, networked among more capable sensors and platforms.
- With its 5th-generation capabilities, Air Force will be a critical contributor to, and enabler of, the joint force.

DEFINITION FIFTH GEN AF MCINNES WILLIAMS FOUNDATION

[MY FIFTH GENERATION—WILLIAMS FOUNDATION CHRIS MCINNES](#)

Note this from the article....

In my view, a fifth-generation force is an organisational response to the Information Age and the characteristics of fifth-generation systems. 'Fifth generation' began as a technology descriptor and assessments of that technology's

impact on warfare has been used derive a notion of fifth-generation warfare. The missing leg of the triad so far has been the organisational change necessary to operate fifth-generation technology most effectively to fight fifth-generation warfare. This appears to be, as Peter Layton points out, a “very complicated way of war” so organisational considerations are important.

DEFINITION FIFTH GEN WARFARE APDC

APDC FIFTH GENERATION AIR WARFARE BY DR PETER LAYTON RAAF APDC 2017

FIFTH-GENERATION AIR WARFARE THINKING The fifth-generation air warfare concept is a powerful one but to be best applied needs to be understood. Fifth-generation air warfare may be conceived as comprising four parts: a network, a combat cloud operational concept, a multi-domain focus and a fusion warfare construct. In some respects the order of these parts reflects the sequence in which they have been incorporated into the idea of fifth-generation air warfare. The concept has progressively evolved and this evolution continues.

DEFINITION FIFTH GEN PLATFORM

F-35 JOINT STRIKE FIGHTER (JSF) PROGRAM CONGRESSIONAL RESEARCH

Jeremiah Gertler Specialist in Military Aviation (Congressional Research Service) April 23, 2018

“Fifth-generation” aircraft incorporate the most modern technology, and are considered to be generally more capable than earlier-generation aircraft. Fifth-generation fighters combine new developments such as thrust vectoring, composite materials, stealth technology, advanced radar and sensors, and integrated avionics to greatly improve pilot situational awareness.

DEFINITION FIFTH GEN PLATFORM APDC

PATHFINDER APDC FIVE GENERATIONS OF JET FIGHTER AIRCRAFT

The JSF is the only fifth generation platform that Australia is acquiring. Worth noting the following:

Only Jet Fighter Aircraft are defined in generational terms.

The following paragraphs are taken from APDC PATHFINDER Issue 170 Jan 2012

The notion of aircraft generations, a term that applies to only jet rather than propeller driven fighter aircraft, appeared in the 1990s and attempted to make sense of the leap-frogging improvements in performance to jet fighter aircraft brought about through major advances in aircraft design, avionics, and weapon systems. While the rationale that constitutes a generational shift is debatable, a generational shift in jet fighter aircraft occurs when a technological innovation cannot be incorporated into an existing aircraft through upgrades and retrospective fit-outs.....

JERICHO OVERVIEW & VISION

JERICHO BOOKLET

Worth providing an overview of Jericho.....

Plan Jericho will transform Air Force into a fifth-generation enabled force that is capable of fighting and winning in 2025; a modern, fully integrated combat force that can deliver air and space power effects in the information age.

Also worth mentioning the Jericho Vision:

JERICHO VISION: To develop a future force that is agile and adaptive, fully immersed in the information age, and truly joint. Jericho Booklet, P 15.

FIFTH GEN ISRAEL COMBAT

F-35 SEES FIRST COMBAT ACTION

Lockheed Martin's F-35A has been used in combat for the first time during an Israeli operation in the Middle East. **See ADM Article.**

DEFINITION FIFTH GEN WARFARE RNZAF

FIFTH GEN WARFARE RNZAF BULLETIN ISSUE 15, DECEMBER 2017

Fifth-Generation' refers to a specific generation of jet-powered fighter aircraft.

Fifth-Generation Air Warfare is network-centric and uses a 'combat cloud' operational construct.

Fifth-Generation Air Warfare is expensive and vulnerable to physical and cyber-attacks.

'Fifth-generation' is now used to describe an air warfare concept that encompasses and combines aspects such as networkcentric thinking, the combat cloud operational construct, multi-domain battle and fusion warfare; space only permits a brief overview of the first two aspects. The fifth-generation air warfare concept is based around interconnectivity and instantaneous sharing of information. It is reliant on an effective sensing grid that can detect, track, and identify targets and an information grid that can receive, process, store, protect and communicate information quickly and securely. The sensing grid comprises anything ranging from dedicated sensing systems, such as surveillance satellites, to the single soldier on the battlefield. Each sensor becomes an individual node within the grid and a vital requirement is having the ability to upload information.