

Guarding the ‘gold’

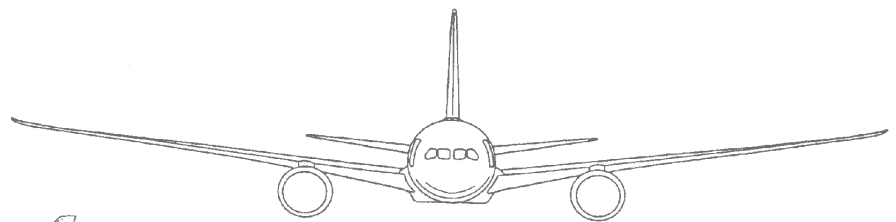
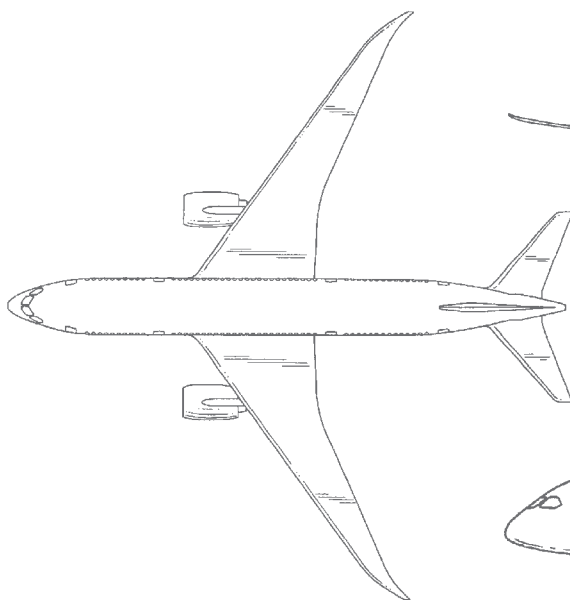
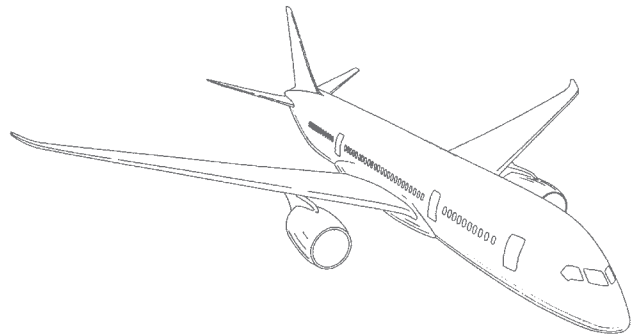
In 1903, the Wright brothers sought patent protection for their flying machine. Their disclosure contained descriptions and drawings of their glider’s three-axis flight control system, including wing “warping” to control roll, a rudder to control yaw and a forward elevator to set pitch. U.S. Patent No. 821,393 was issued to the Wright brothers in 1906, which meant no one could use their design without getting their permission and paying them a royalty.

Today, the Boeing 787 Dreamliner has more than 1,000 patents granted or pending, and additional innovations that are held as Boeing Proprietary Information, or trade secrets. Due to the advanced, highly complex nature of this jetliner, no single patent can capture all of its breakthrough technologies.

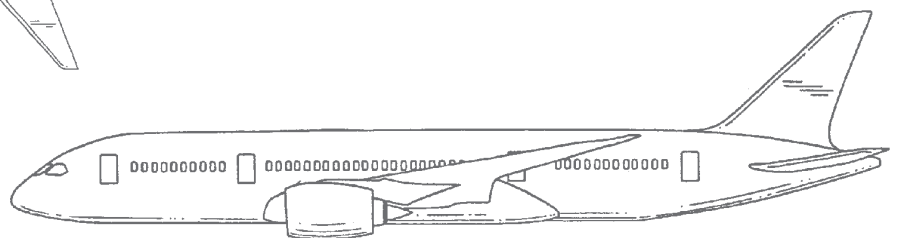
The Dreamliner will play an enormous role in Boeing’s business performance for years to come, with customers having placed 866 orders for the plane through March. Given the 787’s technological edge, Boeing has gone to great lengths to protect its intellectual property in this airplane—and to prevent unauthorized

Protecting Boeing innovations is critical to maintaining a competitive advantage

by **Cindy Naucner Glickert**



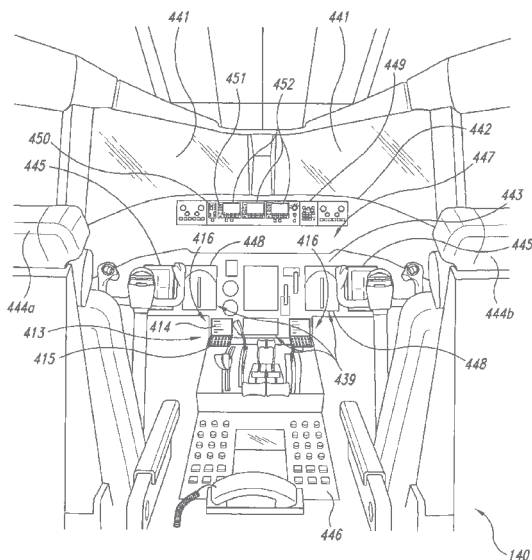
From U.S. Design Patent No. D515,013





“As innovation accelerates and we maximize and leverage its potential, it’s more important than ever for us to safeguard technology that’s critical to our business.”

– Martha Ries, vice president of Boeing Intellectual Property Management



From U.S. Patent No. 7,177,731

parties from getting hold of technologies that provide economic value to Boeing.

“As innovation accelerates and we maximize and leverage its potential, it’s more important than ever for us to safeguard technology that’s critical to our business,” said Martha Ries, vice president of Boeing Intellectual Property Management. “Protecting our intellectual property ensures we can use our technology to build our products.”

Protection of Commercial Airplanes’ Dreamliner technology is just one example of how Ries’ organization is safeguarding Boeing’s intellectual property. This team also works closely with Boeing Defense, Space & Security to protect key technologies in areas critical to its growth, including unmanned systems, cyber

PHOTO: Martha Ries, right, vice president of Intellectual Property Management, discusses protection of composites technology with Kathy Moodie, Commercial Airplanes director of 787 Assembly Operations, and Bob Nadalet, director of IP Strategy & Protection.

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technology and energy management. And by working earlier in the technology-development process with business-unit leaders and technologists across the company, as well as the Enterprise Technology Strategy team, Intellectual Property Management is better able to spot and protect key knowledge, Ries said.

Intellectual property—a term applied to patents, trade secrets, trademarks and copyrights—is worth more than \$5 trillion in the United States, according to the U.S. Commerce Department. Examples of Boeing intellectual property include proprietary information, such as pricing information, business plans and engineering data; invention disclosures and patents; copyrighted material; and trademarks.

Understandably, intellectual property is referred to as the “company gold” because of its strong market value.

And there are those who want to steal it. The theft of intellectual property and copyright piracy is on the rise. That’s why Intellectual Property Management at Boeing plays a critical role in protecting the company’s future competitiveness—and why it’s crucial for Boeing employees to understand how to identify and protect intellectual property, according to Intellectual Property Management leaders.

Last year, the Intellectual Property Management organization was given companywide responsibility to watch over Boeing’s competitively sensitive information. The team, whose mantra is to “identify, protect and leverage Boeing IP,” has been busy.

“Boeing is leading the industry and continues to grow the number of patents granted by approximately 7 percent annually,” said Christine Wren, director of business development for the Patent Board, a leading patent analysis group that designated Boeing as the top U.S. patentee. In 2010, Boeing was ranked the top U.S. patentee among the world’s aerospace and defense companies for the fourth year in a row. ■

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Intellectual property is a product of the mind or intellect, in a concrete or abstract form, in which one can assert ownership rights. Boeing Procedure 1003 is the starting point in any effort to protect Boeing intellectual property. To read the document, visit <http://policyplus.boeing.com/download.aspx?filename=PRO-1003.pdf> on the Boeing intranet.

Boeing Proprietary Information is also intellectual property, but it is information that is not easily patented or, in some cases, information that is so competitively critical that it is better protected as a trade secret rather than through a publicly accessible patent filing. Because of this value to the company, employees must take precautions to identify and protect Proprietary Information. For more information, refer to Boeing Procedure 6901, at <http://policyplus.boeing.com/download.aspx?filename=PRO-6901.pdf> on the Boeing intranet.

PHOTO: Chuck Cruit, director of IP Policy & Compliance, and Debbi Smith, Boeing Military Airplanes manager of Export Administration, coordinate new procedures for managing Boeing Proprietary Information in Boeing rotorcraft exports.

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“It is essential that we patent-protect our key technologies in countries where we manufacture and market our products.”

– Yen Yee, director of Patent Portfolio Management

PHOTO: PAUL PINNER/BOEING

Strategy for **success**

To better identify and protect critical knowledge, the Intellectual Property Management organization has been organized along functional, rather than business-unit, lines. The structure strengthens its support to customers and allows Intellectual Property Management to leverage best practices across Boeing. The teams are:

- **IP Strategy & Protection:** This group works across the company to develop intellectual property strategy plans around the key technologies that will give Boeing the greatest competitive advantage and retain the freedom to develop, build and support its products. Last year, a strategy was crafted for handling composite materials technology that addresses program needs across Boeing. This included determinations on what composite technologies needed the greatest protection and what could be shared outside the company with Boeing’s suppliers and customers. “We’re focusing on protecting the growth markets that are important to the company’s future competitiveness,” said Bob Nadalet, director of IP Strategy & Protection.
- **Patent Portfolio Management:** Because Boeing operates around the world, its intellectual property activities have a global range. “It is essential that we patent-protect our key technologies in countries where we manufacture and market our products,” said Yen Yee, director of Patent Portfolio Management. This team also focuses intellectual property protection and patent filing around “IP chokepoints,” or the critical technologies Boeing needs to build its products, Yee added. The group supports the Enterprise Technology Strategy team, which works to maximize the return

from research and development. Their goal: Ensure early protection of key technologies that are important to multiple programs.

- **IP Policy & Compliance:** This group’s work includes monitoring for misuse of Boeing intellectual property outside the company, such as patent infringements, counterfeited parts, illegal Internet sales of company software or publications, and unauthorized copying, or piracy, of copyrighted materials, logos and trademarks. “Misuse or lack of awareness of IP can put the company at risk in multiple ways, including loss of our competitive advantage and loss of revenue through ‘free rides’ on our technology, and even exposure to civil or criminal liability,” said Chuck Cruit, director of IP Policy & Compliance.
- **Business Development & Licensing:** The team oversees not only the “licensing out” of Boeing-owned intellectual property, which generates revenue for the company and can open new markets or distribution channels, but also the reverse, or licensing in, of technology. The latter brings into the company external technologies and products that can cut the expense and time of research and development. “It’s to our competitive advantage to look at externally as well as internally sourced technology that will support Boeing’s key growth areas,” said Luis Valdes, director of Business Development & Licensing for Intellectual Property Management.

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