chill of focusing first and foremost on Nazi Germany, King argued for blunting Japanese advances, fearing that in time Japan would strengthen its strategic position to the disadvantage of the Allies. According to King, the “strategy in the Pacific depended on two cardinal points: Hawaii must not fall, and Australia must not fall.”2 “King... insisted on launching an early Pacific counteroffensive in the Solomon Islands.” He overcame objections of Navy and US Marine Corps commanders and of General Douglas MacArthur, who had been driven from the Philippines, and “who wanted the Pacific campaign consolidated under his singular authority.”3

Operation CARTWHEEL – the grand strategy for the South Pacific devised by the chiefs of the Army, Navy, Army Air Forces, and Admiral William Leahy, chief of staff to the president—called for coordinated offense between the Solomons and New Guinea.4 A major early objective was Rabaul, the major Japanese headquarters on New Britain Island that had been seized by the Japanese in late January and early February 1942. Located 490 miles northeast of Port Moresby, New Guinea, and 600 miles northwest of Guadalcanal, with its airfields and harbor, Rabaul was the major Japanese base for supporting offensive operations against New Guinea and the southern Solomons.

King ordered an attack on Guadalcanal in the southern Solomon Islands on 14 June 1942.6 Two months later the Marines landed, surprising the Japanese on Guadalcanal.
charts... provided little detail about coral heads.” There was no information on gradient and firmness of the proposed landing beaches, the depth of streams, or Japanese fortifications. On a crash basis intelligence officers interviewed New Zealand people who had lived on Guadalcanal and flew an initial B-17 photo reconnaissance mission to obtain essential intelligence.7

Radio intelligence – communications intelligence (COMINT) in today’s vernacular – in 1942 consisted mostly of the exploitation of signal externals, direction finding (DF), call signs, etc. “[T]he field of cryptanalysis was unproven, little understood, and shrouded in secrecy. It [had] even been condemned as unethical…”8 Even after the Fleet Radio Unit in Hawaii (FRUPAC – known as “Station Hypo”) broke the JN-25 code exploitation was very limited.9 The carrier raids on the Marshall and Gilbert Islands in early February, and Doolittle’s raid on Tokyo on 18 April, benefited US Navy cryptanalytic efforts. “Each new raid prompted the Japanese to spew forth an immense volume of raw radio traffic, which in turn accelerated Hypo’s progress.”10

Despite limited intelligence capabilities, US forces were not without eyes and ears. On New Guinea, the Bismarck Islands, and the Solomons, “[b]y December 1939, [the Australians] had enrolled as many as 800... plantation managers, government administrators, missionaries, anyone who wanted to serve, as watchmen who could inform [Australian] naval intelligence of enemy movements and actions.” This was called the Ferdinand organization. “Chief observers [were] trained to communicate by radio.”11 They were to prove important in subsequent operations. In April 1942 the Allied Intelligence Bureau (AIB) was formed as part of MacArthur’s SOWESPAC headquarters. AIB oversaw intelligence operations, including the coastwatchers of Ferdinand, as well as guerrilla warfare, and propaganda.12

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**BATTLE OF GUADALCANAL**

On August 7, 1942, in “Operation Watchtower,” the 1st Marine Division landed on Guadalcanal. Meeting no Japanese resistance, it quickly seized the Japanese airfield under construction, renaming it Henderson Field. Marines also captured the smaller island of Tulagi across the channel from Guadalcanal. Japanese radio intelligence detected communications of an American headquarters and concluded that operations were planned. Reaction was swift. The Japanese launched an immediate long-range air attack from Rabaul.13 Japanese bombers overflowed Bougainville in route to Guadalcanal. Two coastwatchers radioed warnings to Australia, which were forwarded to US commander on Guadalcanal via Hawaii. The bombers missed all ships. But the next day there was another air raid. And “[f]or the second consecutive day, a coastwatcher... provided vital forewarning...” “It was a pattern that would continue throughout the Solomons campaign.”14

On the night of August 8-9 an Imperial Japanese Navy battle group approached Guadalcanal. The only warning came from the picket destroyer USS Patterson, but it was too late. The Japanese Navy had changed its operational code, which denied US eavesdroppers COMINT. Intercepted naval messages were not decrypted in time.15 Naval intelligence had to rely on analysis alone, which had little to go on.16 In the nighttime Battle of Savo Island the Japanese sank three US and Australian heavy cruisers, another was scuttled, and another damaged. Additionally, two destroyers were damaged. 1,077 Allied sailors were lost. Japanese Admiral Mikawa, lacking intelligence on any remaining Allied warships, broke off the action instead of attacking the landing support ships, which would have been disastrous for the Marines.17

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**SOUTHERN SOLOMON ISLANDS**

On 10 August “The intelligence picture [around Guadalcanal] remained clouded, but air reconnaissance, coastwatcher reports, and bits and pieces of ‘Ultra’ [decrypted messages]... seemed to portend a major Japanese fleet movement into the lower Sol-
mons.” Daily B-17 reconnaissance flights over Rabaul detected a Japanese naval buildup from 12-16 August. But the locations of Japanese carriers were unknown. On 22-23 August the skies over the Solomons were “congested with reconnaissance planes” (US B-17s, PBYs, and Marine dive bombers from Henderson Field, as well as long-range Japanese Kawanishi flying boats) seeking the enemy. Intelligence reports indicated a major Japanese effort from Rabaul to recapture Guadalcanal and Tulagi from 23-26 August. On the afternoon of 24 August the naval Battle of the Eastern Solomons commenced. USS Saratoga’s planes sank the Japanese light carrier Ryujo. But Japanese DF located the two US carriers. USS Enterprise was damaged. Marine Corps planes sank a Japanese cruiser and transport, scuttling the planned invasion. The US task force had suffered from “dreadful radio communications,” that despite the advantage of having radar, impeded command and control of the carriers’ air defense and “spotty intelligence.”

On Guadalcanal the Marines had “a nearly complete lack of intelligence about enemy troops on the island.” Coastwatcher Martin Clemens contributed to the Marines “invaluable intelligence through his native scouts,” who “were to prove fearsome guerrilla fighters.” Japanese army communications could not be decrypted until June 1943. But US cryptanalysts were reading an ever-increasing number of Japanese JN-25 naval communications.

“Long-range [Japanese] airstrikes from Rabaul were a daily ordeal, but the Americans [on Guadalcanal] usually received two hours’ warning from coastwatchers on Bougainville.” By September, the Marines installed an air search radar on Guadalcanal (~80-mile range). “Radio intelligence made the difference because the [Japanese naval air force] usually used the same frequencies... All the [US] radio men had to do was listen for Japanese on the bomber frequencies and sound the warning.” Radio intelligence provided a fifteen-minute advantage over radar. Captured Japanese radio sets also allowed eavesdropping on enemy communications and the identification of Japanese units.

The Japanese air raids tried to suppress the “Cactus Air Force” at Henderson Field, which posed a major threat to their resupply of forces on Guadalcanal. For speedy nighttime resupply runs to Guadalcanal, nicknamed the “Tokyo Express,” the Japanese Navy used destroyer/transport. “Codebreaking and aerial reconnaissance contributed greatly to the difficulties of the Tokyo Express, by providing specific warnings of planned resupply operations.” Coastwatchers also tipped off US forces of Japanese resupply runs. The Japanese hunted coastwatchers; some were

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US CARRIER LOSSES IN 1942

Radio intelligence was essential in directing US carrier operations and air raids. Carriers were the essential offensive US weapon and in 1942 a precious asset.

**USS Lexington** – sunk in Battle of Coral Sea (7-8 May 1942).

**USS Yorktown** – sunk in Battle of Midway (4-5 June 1942).

**USS Saratoga** – torpedoed in January 1942 and out of action for four months. Torpedoed again in August.

**USS Enterprise** – damaged by dive bombers (24 August 1942, again 26 October 1942).

**USS Wasp** – torpedoed by Japanese submarine and scuttled (15 September 1942).

**USS Hornet** – sunk in Battle of Santa Cruz Islands (26 October 1942).

By October 1942 the only operational carrier left in Pacific was the damaged USS Enterprise.¹

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¹. Ibid, p. 59.

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caught, but others continued operations, protected by loyal local inhabitants.

In October, the 1st Marine Division was reinforced by US Army’s Americal Division. And the first US Naval radio intelligence unit arrived on Guadalcanal for DF. Weeks later, on 1 November, a Marine Corps COMINT station was also established on Guadalcanal.

On the night of 11-12 October, the US “ambushed” a Japanese task force, capturing 113 survivors. Their interrogations led to a “valuable storehouse of knowledge” about the Japanese Navy.

Intelligence did not always provide warning. On three nights, 14, 15, and 16 October, Japanese ships severely shelled Henderson Field. However, by mid-October intelligence indicated that a major Japanese offensive seemed likely involving the largest Japanese fleet since Midway. The Battle of the Santa Cruz Islands, east of Guadalcanal, took place on 25-26 October. A US Navy PBY patrol plane detected Japanese carriers, and Japanese radio intelligence identified USS Enterprise. Early on 26 October US carrier planes put the carrier Zuïho out of action. By mid-morning a second Japanese carrier, Shokaku, was also put out of action. USS Hornet’s and USS Enterprise’s radars detected incoming Japanese planes from two other large Japanese carriers. Enterprise was severely damaged and Hornet was scuttled after being crippled in the attacks.

On 12-13 November, air search detected a Japanese attack force including battleships. An earlier intelligence assessment had forewarned of Japanese intentions. The Naval Battle of Guadalcanal lasted from 13-15 November. There were heavy losses on both sides, helping to give the name “Ironbottom Sound” to the strait between Guadalcanal, Tulagi and Savo Island. On the night of the 14th US Navy surface search radar detected Japanese ships. Two Japanese battleships, Hiei and Kirishima, were sunk, as were eight Japanese transports. The battle showed the “American advantage in radar fire control systems...” The US had turned back the last Japanese attempt to seize Guadalcanal and Tulagi.

On Guadalcanal the situation for the Japanese army had become desperate. Tokyo Express resupply operations were often frustrated by US air and naval attacks. Captured diaries and Japanese prisoners by December 1942 revealed the enemy suffered from poor food, starvation, and disease. Only 4,200 soldiers were combat capable, less than 15% of the total. Meanwhile, in January 1943, the 1st Marine Division was relieved by fresh troops of the Army’s XIV Corps. Also, in January Australian and US forces seized Buna on north coast of New Guinea. This was the start of the Allies moving westward up the coast of New Guinea. As New Guinea was central to the Japanese strategy against Australia Tokyo decided to abandon the struggle on Guadalcanal. In late January and early February Tokyo Express runs evacuated many of the remaining Japanese troops on Guadalcanal. US intelligence detected the activity but missed what was actually happening. It was believed that the Japanese were landing more troops. On 9 February US forces discovered that all able Japanese had left. Most of the time “[t]he rigidity inherent in Japanese operations led to repeating patterns that could be analyzed and predicted by the Allies. Even when communications intelligence failed to discover the Japanese intentions, American commanders could often foretell where, when, and how the enemy would mount his next assault.”

An intelligence windfall occurred on 29 January. The Japanese submarine, I-1, ran onto a reef off Guadalcanal after being attacked by New Zealand navy units. I-1’s role was as a cargo and resupply ship. “Seized from the submarine were approximately 200,000 [pages of] JN-25 codebooks,” including the latest versions, as well as communications documents, and equipment. The Japanese Navy introduced a new variant of JN-25 after the I-1 loss. But Hypo rapidly broke it.

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**YAMAMOTO SHOOTDOWN**

On 3 April 1943 Japanese Combined Fleet Commander, Admiral Isoroku Yamamoto, the mastermind of the attack on Pearl Harbor, and his chief of staff, Rear Admiral Ugaki, flew to Rabaul to oversee the “aerial counteroffensive against Allied shipping and bases in the southern Solomons and New Guinea.” It was to consist of ten days of heavy air attacks against Guadalcanal. On 13 April they planned visits

32. Ibid, p. 189.
to forward bases on Bougainville scheduled for the 18th. Station Hypo in Hawaii decrypted the itinerary message. The item in the 15 April 1943 CINCPAC daily ULTRA Bulletin read:

At 1000 on 18 April YAMAMOTO himself, via bomber escorted by six fighters, will arrive from Rabaul in the Ballale-Shortland area... In case of bad weather the trip will be postponed until 19 April.  

Extended range US Army Air Force P-38 fighters intercepted the Japanese flight off southern Bougainville Island. Admiral Yamamoto died in the crash of his plane, but Ugaki survived in his plane. The Japanese had lost its most able admiral and strategist.

**SOLOMONS CAMPAIGN CONTINUED**

By the beginning of 1943 the Japanese in the South Pacific had lost the initiative and were increasingly fighting defensive battles. Improving US and Allied intelligence fed increasingly effective offensive operations. In March in the Battle of the Bismarck Sea, MG George Kenney, MacArthur’s air deputy, using Ultra, devastated a Japanese resupply convoy headed to Lae on the north coast of New Guinea. After this debacle for the Japanese the strategic initiative on New Guinea passed to Allies.  

The Japanese were faced with dual offenses in the South Pacific – New Guinea and the northern Solomons.

By April the US Army’s Central Bureau in Australia, a combined US, British, Australian signals intelligence effort, started reading Japanese army codes.

On 30 June US forces landed on New Georgia and Rendova Islands. The objective was the major Japanese airfield at Munda airfield. An advanced US reconnaissance team, consisting of an air operations officer and civil engineer, clandestinely scouted New Georgia for possible airfield locations. After the landing Seabees established an airfield at Segi Point. The Marines also sent an advanced reconnaissance party, that was assisted by a coastwatcher and locals, to scout amphibious landing sites. The seizure of Munda airfield turned up Japanese geographic codes used in radio messages for the Pacific and a Japanese South Pacific strategy document. Around New Georgia there were several minor naval battles. Besides being alerted by SIGINT “...the Americans were learning to use their superior radar systems to advantage,” and how to correlate on-board ship “radar and other sources in the Radar Plot, which later evolved into the Combat Information Center.”

On 12-13 July the Naval Battle of Kolombangara involved a “wild melee” between opposing cruisers and destroyers. The Japanese were only detected when painted by US radar but succeeded in landing more troops on Kolombangara. The US decided to bypass Kolombangara Island, which then had a large concentration of Japanese troops. Instead in mid-August the US invaded Vella Lavella to the north, which had only a small Japanese detachment.

The Japanese also used coastwatchers, who were usually Japanese military. They became important as the Allies moved up the Solomons. Also, the Japanese had a radio intelligence unit at Rabaul and radar. Coastwatchers provided an hour’s warning of US air raids.

In August 1943 senior Allied commanders made the strategic decision to bypass the Japanese stronghold of Rabaul on eastern New Britain Island.

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37. Drea, p. 61.  

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**BREAKING OF IMPERIAL JAPANESE ARMY CODES**

6 Apr 1943 – Army mainland code. Could read “a few hundred messages per month” at first.  
April 1943 – Army Shipping Transportation Command code – provided convoy sailing times, ship location at noon, speed, course, cargoes, etc.  
September 1943 – military attaché code.  
January 1944 – Australian forces captured at Sio, New Guinea, the Japanese 20th Division’s cryptographic library. This allowed Central Bureau to read Japanese army messages without delay, increasing from a few hundred to 20,000 per month.

1. Breaking the Japanese military attaché code may have had more impact on the European campaign than Pacific. Cryptanalysis of Japanese diplomatic ("Purple") and attaché messages provided detailed information of Hitler’s plans, the Battle of the Atlantic, and Nazi defenses against the upcoming Allied invasion of France. [F. H. Hinsley, British Intelligence in the Second World War, London: HMSO, 1993, pp. 319, 379, 436-7, 448, 460, 496 and 500.]  
2. Drea, pp. 61-2. See also Desmond Ball and Keiko Tamura, Breaking Japanese Diplomatic Codes, Canberra: Australian National University, 2013.
The strategy required suppressing Rabaul’s offensive capabilities by constant air strikes. Operations thereafter involving Allied forces in the Solomons and MacArthur’s on New Guinea were focused on the strangulation of Rabaul. But the Allies needed airfields nearer to New Britain.

On 6 October the Japanese sought to evacuate its garrison on Vella Lavella island, which US and New Zealand troops had invaded in mid-August. In the Naval Battle of Vella Lavella Japanese destroyers distracted US destroyers allowing for a successful evacuation.45

On 27 October New Zealand forces landed on the Treasury Islands of Mono and Stirling on which the Allies wanted to establish a radar site. The island was secured within two weeks and Seabees established another forward airfield.46

**CAPTURE OF BOUGAINVILLE**

Bougainville was seen as important for neutralizing Rabaul. Australian intelligence estimated that there were up to 65,000 troops of the Japanese 17th Army on the island. From 28 October to 4 November the US Marine Corps’ 2nd Parachute Battalion conducted a raid on the island of Choiseul, 45 miles southeast of Bougainville. As part of a deception operation to make the Japanese believe Allied landings would occur on the east side of Bougainville, the battalion’s commanding officer sent an unencoded message stating he had landed 20,000 Marines. The previous month Allied reconnaissance patrols had been sent to Choiseul to contact coastwatchers on the island and gather intelligence, including about Japanese minefields. The existing maps of the region were poor, based on 1890 German Admiralty charts. “Australian coastwatchers... would again play a key role in the final leap to Bougainville...”47

**BOUGAINVILLE AND NEW BRITAIN ISLANDS**

On 1 November the I Marine Amphibious Corps, with the 3rd Marine Division and 37th Army Infantry Division, some 14,000 strong, landed on the west side of Bougainville at Cape Torokina near Empress Augusta Bay. Recognizing the value of signals intelligence from past operations two Marine Corps radio intelligence units were assigned to Corps.48 There were no Japanese air attacks as, learning from experience, the landing was accomplished quickly. But the Japanese planned a counter-amphibious landing. Alerted by a US submarine, in the Battle of Empress Augusta Bay on 2 November US Navy cruisers and destroyers turned back the Japanese invasion force. Despite the fact that US destroyers had difficulty in the night action even with radar and IFF (Identification Friend or Foe) the battle “was a disaster for the Japanese.”49 It was the “last major naval action...[of]...the Solomons campaign.”50 Fighting on the island was brutal. Disease was rampant. The Marines held part of the island for a year. In November 1944, Australian troops mopped up the remaining starving Japanese. The campaign only ended in August 1945.51

At the end of October 1943 US radio intelligence noted Japanese naval air force planes being sent to reinforce Rabaul.52 On 2 November a force of 75 US Army Air Force B-25s bombers, accompanied by 80 P-38 fighters, struck airfields around Rabaul. Seven Japanese heavy cruisers arrived on 3 November. Further air attacks on the 5th, however, forestalled another Japanese offense against the Bougainville landings. Other air attacks continued on 11 and 17 November that decimated Japanese ships and aircraft.

47. Prados, p. 416.
52. Prados, p. 512.
ENCIRCLING RABAUL

Amphibious landings on other islands served to completely surround the Japanese at Rabaul. On 15 December, forces under MacArthur landed at Arawe on western New Britain Island. Eleven days later additional landings occurred on Cape Gloucester at the far western cape of New Britain. On 15 February 1944 New Zealand forces landed on the Green Islands, north of Bougainville and east of Rabaul. As part of MacArthur’s New Guinea campaign, on 29 February Army troops invaded the Admiralty Islands northwest of Rabaul. With the occupation of Emirau Island, north of Rabaul, the Japanese stronghold was surrounded and left to starve and wither.

CONCLUSION

The Solomons campaign lasted until August 1945. It was costly in naval ships — 67 major ships sunk (29 Allied, 38 Japanese). Aircraft losses were 615 for the US and 683 for the Japanese. But the loss of pilots was devastating for Japan. Over 1,200 died in the Solomons, and Japan’s ability to replace them was limited. The US lost 420 pilots, fewer than the number of planes due to Allied search and rescue efforts. The Allies lost 10,600 men from all causes; the Japanese 86,000.54

“Code breaking and aerial reconnaissance both became most powerful in the hands of American intelligence.” “[I]n the vast Pacific region, Ultra provided impeccable intelligence about Japanese forces hundreds or even thousands of miles away.”55 Prisoner intelligence and document translation grew as important sources after the invasion of Guadalcanal and the beaching of I-1. The worth of intelligence “would grow even more as the war progressed.”56

Peter C. Oleson is the senior editor of The Intelligencer.

55. Drea, p. xiv.
56. Prados, p. 414.