

# The Japanese Plan to Attack Pearl Harbor and the Planning Behind It

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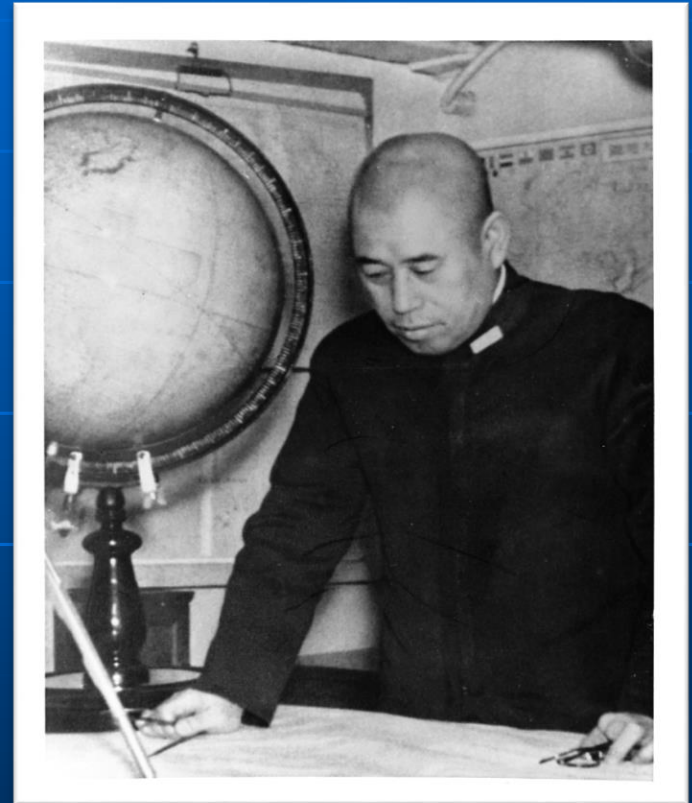


# Outline

- The Visionary
- Getting the Plan Approved
- The Weapons
- The Plan in Detail
- The Plan Evaluated

# The Visionary – Yamamoto Isoroku

- Born 1884 in northern Japan
- Entered Eta Jima 1901
- Fights at Battle of Tsushima 26 May 1905
- Studies in the United States May 1919 – July 1921



# Yamamoto Isoroku

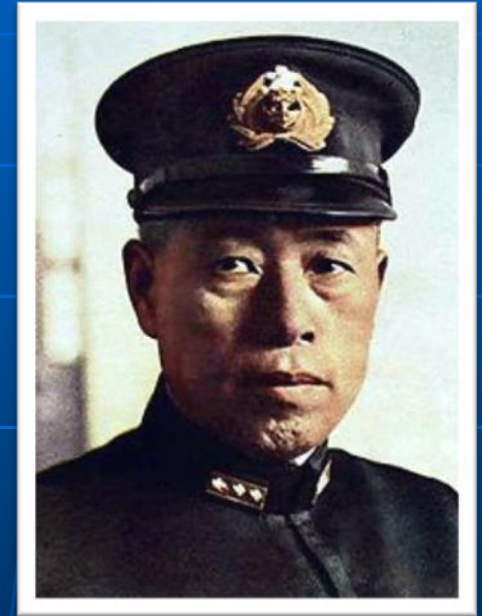


- Becomes an airpower advocate
- Naval attache to the United States  
January 1926 – March 1928
- December 1928: takes command of carrier *Akagi*
- Part of Japanese delegation to London Naval Conference of 1930
- Head of the Technical Division of the Aeronautics Department for 3 years
- Takes command of Carrier Division 1



# Yamamoto Isoroku

- 7 September 1934: Chief Delegate to Second London Naval Conference
- December 1935: Chief of the Aeronautics Department
- December 1936: Vice Navy Minister
- 30 August 1939: Appointed as Commander, Combined Fleet
- 1940-41: Driving force behind Pearl Harbor attack



# Yamamoto Isoroku

## Post Pearl Harbor

- Pushes for Midway operation
- Bungles Guadalcanal campaign
- Operation Vengeance: Shot down over Bougainville 18 April 1943
- Venerated in Japan as a national hero



# Yamamoto: The Reality

- Charisma and intelligence undoubted
- Noteworthy for individuality
- Capable of bold and imaginative decisions
- An airpower advocate who still adhered to traditional views of naval warfare
- Miscalculated American national character
- Leadership after Pearl Harbor erratic and autocratic
- Death in early 1943 meant he was not tarnished with defeat

# Strategic Setting



- 1937: Japan invades China
- 1940: United States ratchets up economic pressure on Japan
- July 1941: United States freezes Japanese assets and imposes total trade embargo
  - Japan imported 90% of all oil; 80% from United States
- Submission to United States impossible
- Only alternative: seize necessary resources
  - Dilemma was that all three Western powers viewed as strategically linked
  - Attack on United States necessary
- Japanese strategy called for attack on world's strongest nation and world's largest empire while still being bogged down in China

# Japanese Pre-war Naval Strategy

- The Great All-out Battle continually refined since the 1920s
- Seize Philippines, await United States counteroffensive
- Decisive battle carefully choreographed
  - Pre-battle attrition by IJN submarines and aircraft
  - Decisive battle area near Bonin Islands
  - Japanese carriers operate in divisions to defeat USN carriers
  - Night torpedo attacks
  - Battleships administer coup de grace



# Enter Yamamoto

- Acquiesces to Naval General Staff movement of the Great All-out Battle from Bonins to Carolines-Marshalls
- May 1940: Roosevelt moves Pacific Fleet to Hawaii
- Not content to wait for USN to cross Pacific
- Believes an opening shattering blow to American morale required to bring United States to negotiating table



# An Idea is Born

- Attacks on Pearl Harbor with carriers are a staple at IJN and USN War Colleges
- Practiced in annual USN fleet maneuvers
- The stuff of fiction by both American and Japanese authors
- Yamamoto discusses plan with CoS in March or April 1940
- Fall 1940: Yamamoto directs RADM Onishi to study a Pearl Harbor attack
- Later tells friend he had decided to launch the attack in December 1940

# Early Planning

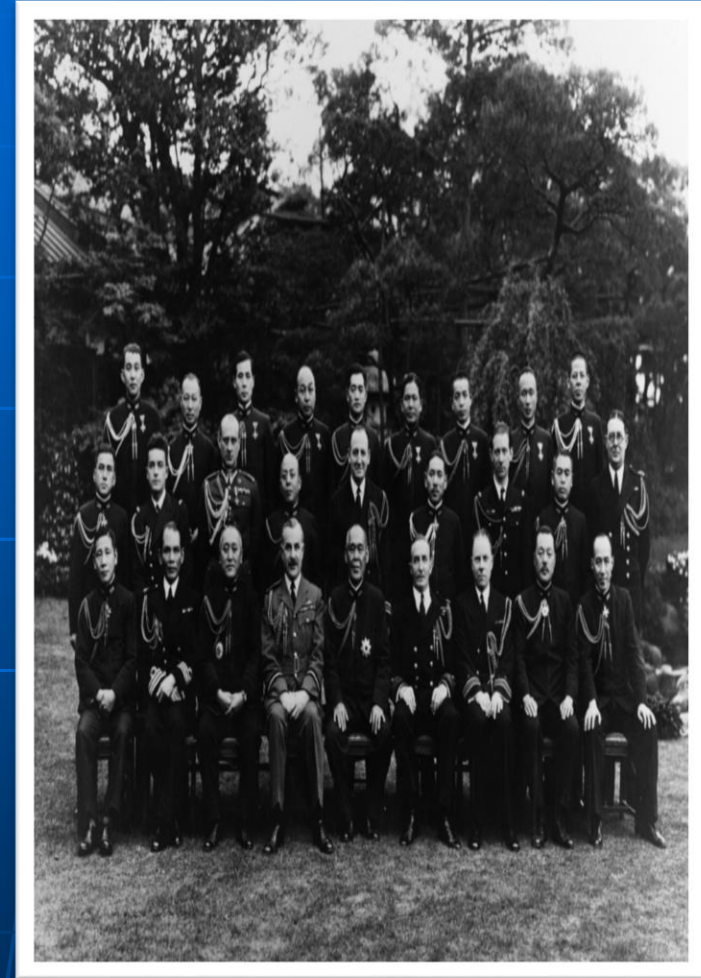


- 7 January 1941: Yamamoto orders Onishi to study the proposed attack
- January 26/27: Yamamoto explains vision to Onishi
- February: Commander Genda Minoru pulled in
- About March 10: Onishi presents draft plan to Yamamoto
- April: Yamamoto begins process of selling plan to Naval General Staff (NGS)
  - NGS thinks plan too risky
  - Needs carriers to support southern offensive
- Late April: Staff of First Air Fleet pulled into planning
- VADM Nagumo Chuichi thinks plan impossible; CoS RADM Kusaka Ryunosuke also has doubts



# The Debate

- 7 August: CAPT Kuroshima again pleads with NGS staff
  - Too risky
  - Refueling issues
  - Weapons issues
  - Surprise in doubt
- NGS agrees to examine plan in annual wargame
  - 16 September “wargame” affirms operation feasible, but underlines importance of surprise
- 24 September: NGS holds conference on operation
- 13 October: Table top maneuvers on Yamamoto’s flagship to examine plan
  - All but one of admirals present argue against attack
- 17-18 October: Issue brought to a head with NGS
  - Yamamoto’s threat to resign ends debate



# The Weapons



- 10 April 1941: IJN forms First Air Fleet
  - Combines two, later three carrier divisions
  - Becomes focal point of Pearl Harbor planning
- Six carriers embarking over 400 aircraft make entire operation possible
- Each carrier has an air group of 3 squadrons
  - Fighter Squadron – Mitsubishi A6M2 Type 0 Carrier Fighter
  - Bomber Squadron – Aichi D3A1 Type 99 Carrier Bombers
  - Attack Squadron – Nakajima B5N2 Type 97 Carrier Attack Plane

# Carrier Division 1

- *Akagi* (flagship of VADM Nagumo)

- 18 fighters, 18 dive-bombers, 27 torpedo planes

- *Kaga*

- 21 fighters, 27 dive-bombers, 27 torpedo planes





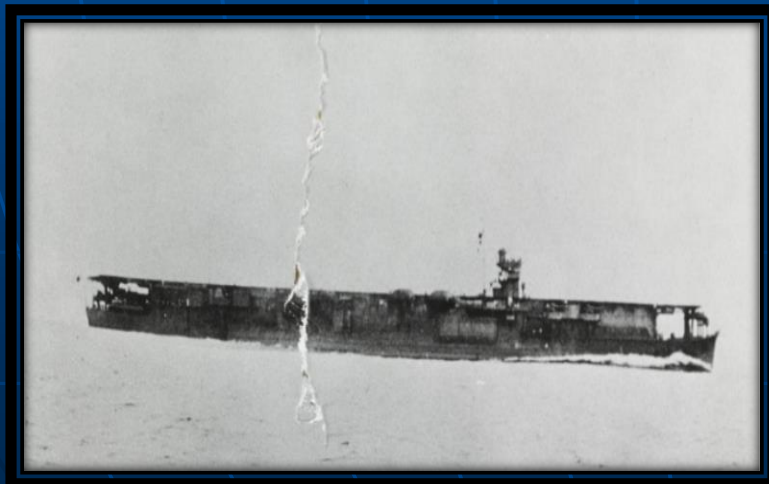
# Carrier Division 2

- *Soryu*

- 18 fighters, 18 dive-bombers, 18 torpedo planes

- *Hiryu*

- 18 fighters, 18 dive-bombers, 18 torpedo planes





# Carrier Division 5

- *Shokaku*
  - 18 fighters, 27 dive-bombers, 27 torpedo planes
- *Zuikaku*
  - 18 fighters, 27 dive-bombers, 27 torpedo planes



# The Aircraft: Type O Fighter

- Crew: 1
- Armament: 2 7.7mm MG, 2 20mm cannon
- Top speed: 336mph

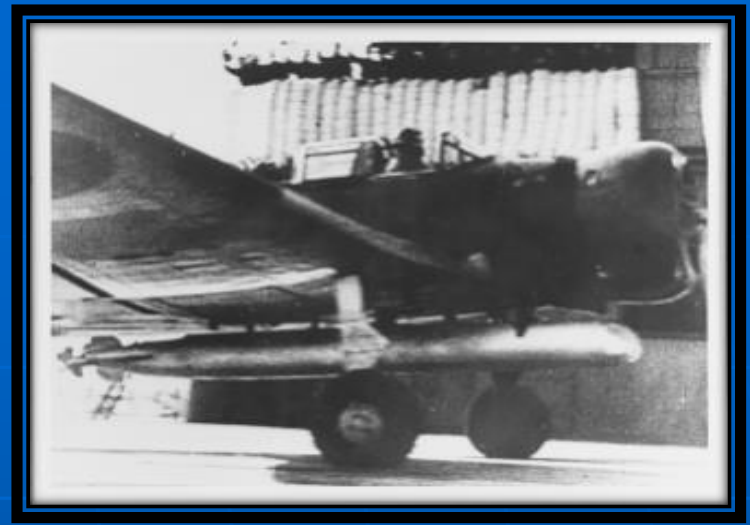


# The Aircraft: Type 99 Dive- bomber



- Crew: 2
- Armament: one 551-pound bomb,  
3 7.7mm MGs
- Top speed: 240mph

# The Aircraft: Type 97 Torpedo Plane



- Crew: 3
- Armament: 1,764 pounds of bombs or torpedoes, 1 7.7mm MG
- Top speed: 235mph

# Planning Issues: Surprise

- Critical to the entire operation
- Several approach directions explored
- Southern and central routes have less stringent fuel requirements, but likelihood of discovery higher
- Obstacles to using northern route:
  - Greater distance, greater refueling requirements
  - Rough winter weather
- Benefits to northern route
  - Less traffic
  - USN reconnaissance to north not as heavy
- Genda and Kusaka recommend northern route; Nagumo approves
- Attack timed for a Sunday and at early morning

# Planning Issues: Refueling

- Only 7 of 20 combatants allocated to force could reach Pearl Harbor without refueling
- Kusaka takes this problem on personally
- Three shorter-ranged carriers carry 55-gallon drums
- Eight oilers allocated to the operation (7 participate)
- Fueling exercises conducted three times in November and during transit to Kuriles



# Planning Issues: Torpedoes

- Torpedoes essential to sink heavily-armored battleships
- Type 91 aerial torpedo not useable in the shallow waters of Pearl Harbor
- Torpedoes modified with a set of wooden extension fins
- Still diving too deep in November exercises
- Genda works with LCDR Murata Shigeharu to devise new tactics
  - B5N2s required to fly at 65' at 100 kts
  - November 11-13: 83% success rate achieved
- Last batch of 50 torpedoes not delivered until 24 November

# Planning Issues: Horizontal Bombing

- Mooring pattern of USN battleships required development of capability to conduct horizontal bombing with armor-piercing bombs
- 800kg bombs dropped from 10-12,000' required to penetrate battleships' horizontal armor
- 150 Type 99 Model 80-3 converted from 16-inch battleship shells
- Pre-April accuracy of 10% insufficient
  - Simultaneous drop by 5-aircraft groups solved accuracy problem
  - Altitude reduced to 3,000 meters to improve accuracy



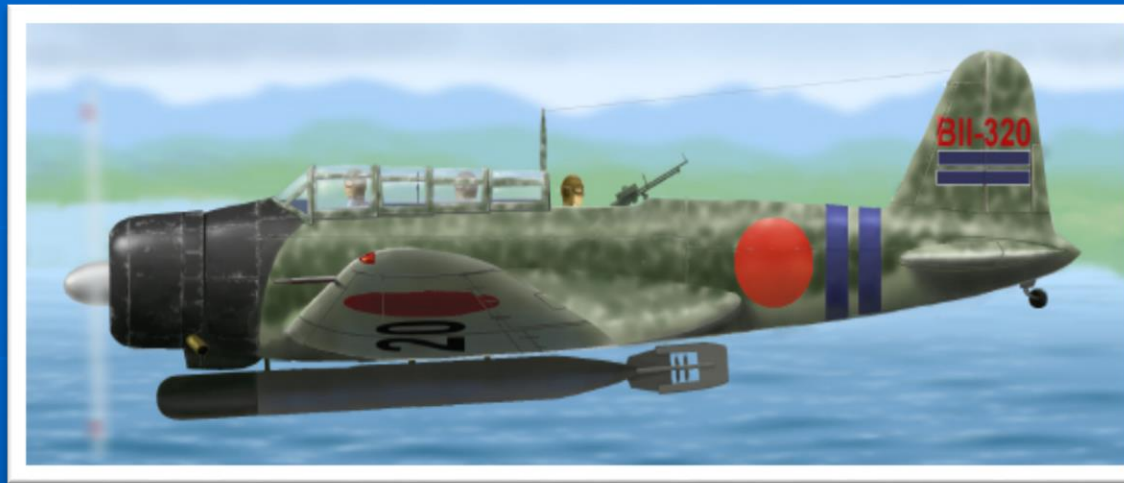
# The Plan in Detail

- Combined Fleet Operation Order Number 1: Target priority – airfields, aircraft carriers, battleships, cruisers and other warships, merchant ships, port facilities and land installations
- Two attack waves
  - Each carrier contributes one of its two attack squadrons to each wave
- Timing moved from dawn to 0800 hours
- First wave launch at 0600 hours 230 miles north of Oahu
- Second wave launch at 0700 hours

# First Wave

- 189 aircraft from all six carriers
- Focal point is against carriers and battleships moored around Ford Island
- Elite aircrew from Carrier Divisions 1 and 2 tasked with destruction of heart of Pacific Fleet
  - 40 B5N2 armed as torpedo bombers
  - 50 B5N2 armed as horizontal bombers
- Inexperienced aircrew from Carrier Division 5 assigned to attack Ford island, Hickam Field and Wheeler Field
  - 54 dive-bombers
- 45 fighters assigned to gain air superiority and strafe airfields
  - 18 against Ford Island/Hickam Field
  - 15 against Wheeler Field/Ewa
  - 12 against Kaneohe Field

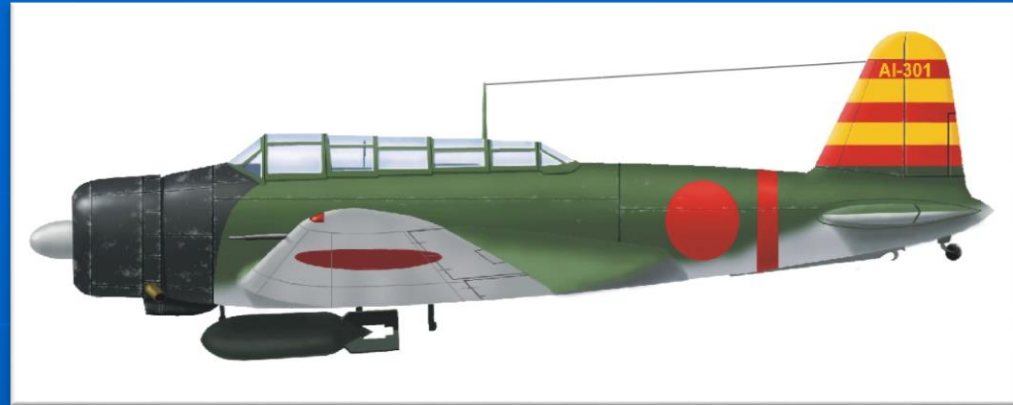
# Torpedo Bomber Plan



- Success essential to overall mission
- Divided into two groups
- Main section of 24 aircraft allocated against Battleship Row
  - Approach from south and attack in long line-ahead formation
- Second section of 16 aircraft allocated against carriers typically moored on northwest side of Ford Island
  - No back-up plan if carriers not present
- Japanese expected 27 hits of 40 total torpedoes



# Horizontal Bomber Plan



- 50 aircraft divided into 5-aircraft sections
- Approach from south to bomb along length of Battleship Row
- Make as many passes as necessary to ensure accuracy
- Focus on destruction of a few targets rather than damaging many
- Select battleships moored in pairs



# Second Wave



- 171 aircraft from all six carriers
- 81 dive-bombers from four carriers allocated against naval targets
  - Emphasis on destroying any damaged carriers
- 54 B5N2s with bombs from two carriers allocated against Ford Island, Hickam Field, and NAS Kaneohe
- 36 fighters allocated against Ford, Hickam, Kaneohe

# The Submarine Plan

- 30 IJN fleet submarines allocated to operation
  - 20 fleet submarines form three picket lines around Oahu
  - 5 used to carry midget submarines
- Much expected of the submarines
  - Viewed as insurance against failure by untested First Air Fleet
- Fleet submarines added in July
- Midget submarines added in late October
  - Yamamoto ignored advice from Genda and others to not use midgets
  - Original plan called for launching of midgets after air attack had begun
  - After emotional plea from 10 midget crewmen, Yamamoto ordered attack simultaneously with air raid



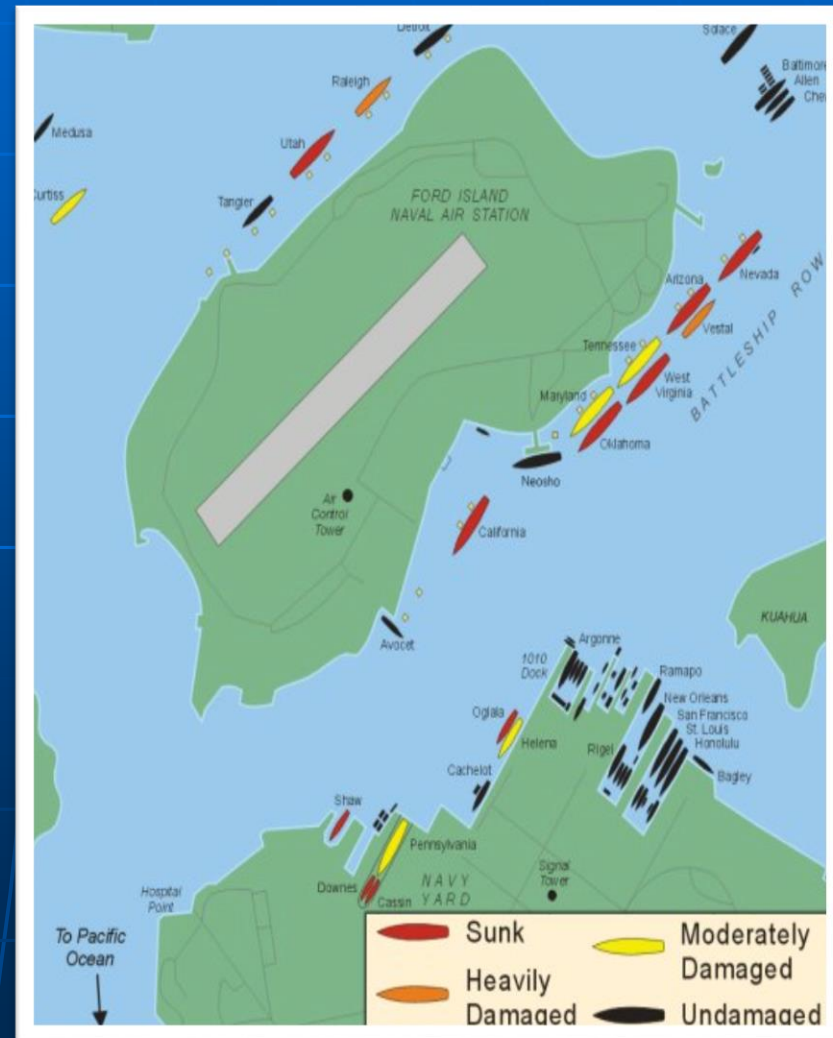
# The Plan:

## Strategic Evaluation

- From military perspective the attack was unnecessary
- From a political perspective the attack was ill-considered
  - Sinking battleships would not destroy American morale
- As conducted, the attack guaranteed Japan's defeat
  - Forces United States into conflict
  - Provides motivation to fight to a final conclusion
- Impact of attack undermines prospects of a negotiated settlement

# The Plan: Operational Evaluation

- Pacific Fleet suffers 18 ships sunk or damaged
  - All but three salvaged and returned to service
  - Old battleships offer USN little value
  - Never used as front-line units
- Pacific Fleet quickly recovers
  - Japanese advance stopped in June 1942
- American wartime production made any losses suffered at Pearl Harbor of only temporary consequence
  - 18 fleet, 9 light, 77 escort carriers; 8 battleships; 13 heavy and 33 light cruisers; 349 destroyers and 420 destroyer escorts; 203 submarine commissioned during war





# The Plan:

## Tactical Evaluation

- Midget submarine involvement risked early detection
- Pre-dawn reconnaissance risked early detection
- Attack should have wreaked greater damage
  - Failure to re-allocate 16 torpedo bombers tasked to sink carriers
  - Fuchida's failure to communicate
  - Over-concentration on battleships by torpedo bombers
  - Faulty target recognition
- Performance by horizontal bombers good
- Performance by second-wave dive-bombers atrocious
- Faulty fighter doctrine left attack aircraft potentially vulnerable

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