Imagery Intelligence – IMINT
RAF Aerial Imagery of the Atlantic Wall
Imagery Analysis seen from a Current Perspective
RAVERSJDE, 23/05/14

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Briefing Points
- IMINT: foreword...
- Data made available
- Area treated: Atlantic Wall Raversijde / Oostende airfield
- Photo Interpretation
- Image Displays & Comparisons
- Use of Collateral Information
- Conclusions
Foreword

IMINT is a Collection Asset which constitutes INTELLIGENCE. Other assets are SIGINT, OSINT, HUMINT.

The advantages of a military IMINT capability today as during WW II remain:
- Reliability of the information (Photographic Interpretation - PI)
- Respect of the confidentiality
- Programming / tasking capabilities
- Independence

IMINT requires today as during WW II:
- A platform (air /space)
- A collection technique (wet films, digital sensors)
- An imagery analysis capability

IMINT requires collateral information resulting from other assets
  ➔ Important role of HUMINT

Data Available

- Royal Air Force Aerial Imagery from the RCAHMS in Edinburgh (Royal Commission on the Ancient & Historical Monuments of Scotland)
- Resistance Sketches from the CEGESOMA (Centre for Historical & Documentation on WW2) and from the SHD Vincennes (Service Historique de la Défense)
- PLEIADES Satellite Imagery from the AIRBUS Consortium (ASTRIUM)
Area of Interest

Satellite PLEIADES Imagery 50cm Spatial Resolution

Photo Interpretation (PI)

PI in the 1940s or today consists of the same requirements

- To know the platform type (aircraft, UAV, Satellite)
- To know the image parameters
  - Titling
  - Camera/sensors type
- To know the weather parameters
  - Image Quality
  - Weather conditions (Cloud coverage)
- Pilot’s navigation /Satellite track
- Confirmation of the localization
WEATHER CONDITIONS

- Very sunny weather increases the contrast of the image
- Impact of the quality Processing Unit
- Still applicable today with Digital Sensor/Data

IMAGE QUALITY

TITLING...

- Day / Time Group
- Focal of the camera
- Recce Unit

- Used until 2000's with Wet Films
- Called nowadays “Metadata”
WEATHER CONDITIONS

- Very Hazy weather causes a blurred image
- Impact of the quality Processing Unit
- Still applicable today with Digital Sensor/Data

Note:
- the Airfield Perimeter
- the Atlantic Wall area
- the Beach at low tide

- Taken by a SPITFIRE of the 4SQN
Extracts of 1942 & 1944 imagery
Focus on the Airfield → Bomb craters
Importance of humidity
“Cleaner” than in 1942

Dimensions: 610m X 100m
Confirmation of the Resistance Info
Bomb craters
01 APR 1942
Extracts of 1942 & 1944 imagery
Probably works in progress in 1942.
Airfield looks “Cleaner” than in 1942

20 APR 1944

11 SEP 1944
• General view of the Western area of The Atlantic Wall Domain
• Prince Charles memorial
• Bunker Area
11 SEP 1944

- Reveted Pads for Arty
- Bunkers

Note obstacles on the beach
Collateral information: sketch made by the Resistance

Comparison with SEP 1944 imagery

Principal characteristic: tremendous respect of the proportions

21 MAY 1944

Collateral information: sketch made by the Resistance

Note the high graphical coherence & the continuity of the information issued by the Resistance

21 MAY 1944 11 SEP 1944
Comparison: SEP 1944 imagery
With Sketch issued by the Resistance

Note the accuracy of the sketch:
- Ramps to the beach
- Respect of the proportions
- Curve of the road
- Distance with the Ramp

21 May 1944

Note the high level of detail expressed by the Resistance

11 SEP 1944
Conclusions

- Photographic Interpretation during WW II and today follows the same basic rules
- Weather circumstances remain of a paramount importance
- Useful & accurate collateral information is indispensable
- Excellent information produced by the Resistance
- The human Photographic Interpretation cannot be replaced by the most sophisticated computer