

Image Sensors: Market Research Report

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Abstracts

This report analyzes the worldwide markets for Image Sensors in US\$ Million by the following segments: Charge-Coupled Device (CCD) Image sensors, and Complimentary Metal Oxide Semiconductor (CMOS) Image sensors.

The report provides separate comprehensive analytics for the US, Canada, Japan, Europe, Asia-Pacific, Latin America, and Rest of World.

Annual estimates and forecasts are provided for the period 2007 through 2015.

A seven-year historic analysis is also provided for these markets.

The report profiles 94 companies including many key and niche players such as Canon Inc., DALSA Corporation, Eastman Kodak Company, FujiFilm Corporation, MagnaChip Semiconductor, Macronix International Co., Ltd., Micron Technology Inc., Mitsubishi Electric Corporation, OmniVision Technologies Inc., PixArt Imaging Inc., Panasonic Corporation, Samsung Electronics Co., Ltd., Sanyo Electric Co. Ltd., Sharp Corporation, Sharp Microelectronics of the Americas, Sony Corporation, STMicroelectronics, and Toshiba Corporation.

Market data and analytics are derived from primary and secondary research.

Company profiles are mostly extracted from URL research and reported select online sources.

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Direct-Track Offers Internet Vehicle Tracking System
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Lowrance Launches the Safari
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iWave Systems Technologies Unveils iw-GPS Receiver Module
TeleNav Unveils GPS Navigation Service
Garmin to Launch GPS Phone Series in Partnership with Asus
Antenna rolls Out M10300 and M10295 GPS RADIONOVA[R] RF Antenna Modules
Fullpower Technologies Unveils MotionX-GPS Drive 2.5 for iPhone
CalAmp Introduces Innovative MST-110 for Motorsports Applications
Trimble Introduces AgGPS EZ-Office 2010 Software Suite
Simrad-Yachting Launches High Speed GS15 5Hz GPS Antenna
Hemisphere GPS Launches A21 Antenna
JEJ Engineering Announces the Introduction of GPS Mapping Software, Garmap
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ASUS and Garmin Introduce Smartphones with GPS Functionality
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Garmin® Launches Touchscreen GPS Devices
Leadtek Research Unveils LR8M03 GPS Tracker
Intermap Technologies Launches AccuTerra Europe
Global Satellite USA Rolls Out Polaris
MapmyIndia Introduces iNav
Blaupunkt Rolls Out TravelPilot
ARC Wireless Solutions Introduces ARC Titan and ARC Atlas
TELUS Introduces Three GPS Solutions
Nokia Unveils N78
Hemisphere Unveils R220™ GPS Receiver
Hemisphere Launches Eclipse Dual-Frequency GPS Receiver
Hemisphere Unveils LV100 GPS Compass Board
Mio to Unveil Leap K1 and Leap G50 Navigation PDA Phones
Pendulum Instruments Launches GPS-12RG
Raymarine Introduces G Series Navigation System
Leica Geosystems Introduces Leica GPS1200+
Trimble Rolls Out GPS-Enabled Juno Series Handheld Computers
Trimble Rolls Out Trimble® 5800 GPS System
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Trimble Unveils Copernicus™ II GPS Receiver
Trimble Rolls Out GPS Pathfinder® ProXRT Receiver
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Magellan® Launches Maestro Elite 3270
Mio Technology Europe Introduces C728
NovAtel Unveils New SMART-AG™ Antenna
Topcon Positioning Systems Launches GMS-2 Pro GIS Mapping Solution
Topcon Introduces New Field Tools for ArcPad®
Inventek Systems Rolls Out the ISM400F1
NAVIGON Introduces NAVIGON 8100T Navigator
Datalogic Mobile Launches New Version of JET PDA with GPS
MapmyIndia Unveils In-Car GPS Navigator
Ethertronics Launches Savvi™ Embedded Ceramic Antenna
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Imarda Launches Vector 300 GWP Vehicle Tracking Device
Navman Wireless Introduces Jupiter 32 xLP GPS module
Hybrid GeoTools Introduces New Version of Active GPX Route Player
Skyhook Wireless Launches XPS 2.0 Software
SkyTraq Technology Unveils Venus634LP Receiver
TruePosition Introduces Hybrid Location Solution
NXP Semiconductors Launches GNS7560 Solution
Fastrax Unveils Fastrax IT321 and Fastrax UC322 Receivers
BikeGPSTracking Introduces MC242 GPS Tracking Unit
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Trimble Launches AgGPS® EZ-Guide® 250 Lightbar Guidance System
Lowrance Launches XOG™ Cross-Navigation GPS
Lowrance Launches GlobalMap® Baja 840C GPS
Mio Technology Launches C620 and C620t, Premium 3D mapping devices
Mio Technology Launches C230
NavCom Technology Launches LAND-PAK All-in-One RTK Land Survey Solution
NavCom Technology Introduces SF-2110R and SF-2110M StarFire GPS Receivers
Symmetricom Introduces SyncServer® S300/S350
Trimble Introduces Trimble® VRS Now™ Service in Ireland
Trimble Introduces the First GPS Multimedia Layer for Google Earth Users
Accord Software Introduces NextNav
Jackson Labs Launches Fury, a GPS Disciplined Oscillator
Symmetricom Launches IEEE 1588 Grandmaster Clock
FALCOM Launches New GPS Module
Magellan Launches CrossoverGPS™ Navigation Device
Magellan Launches New Car Navigation Device

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OHB Systems, Arianespace and ThalesAleniaSpace Bag EU Navigation System Contract
U.S. Air Force Selects Raytheon
ITT Develops Mission Data Unit for U.S. Air Force's GPS III Program
KVH Industries Bags for TACNAV(R) II tactical navigation system

The U.S. Air Force Space and Missile Systems Selects ITT to Provide GPS Services
NATO Extends Contract with Globecom Systems
Quake Global Selects Trimble to Provide GPS Services
Samsung Electronics Enters into Agreement with Tele Atlas
DeviceAnywhere Enters into Co-marketing Agreement with NAVTEQ
PerkinElmer Signs Contract with ITT Space Systems Division
AgRobotics Enters into Marketing Partnership and Strategic Alliance with GVM
ValleyCrest Enters into Agreement with Sprint
Avnet Inks Distribution Agreement with ProlificUSA
RIM Acquires Dash Navigation
MOC Product Company Signs Partnership Agreement with CalAmp
Reliance Communications Collaborates with Satnav Technologies
Francisco Partners Acquires Cybit Holdings
SkyBitz and KORE Telematics Enter into Agreement
TeleCommunications Systems Bags U.S. Patent Rights for Enhanced Handset GPS Systems
GOL Linhas Areas Inteligentes to Equip Aircrafts with GPS Landing System
Russia Launched 3 Navigation Satellites
Differential Global Positioning System Launched in Vietnam
US Air Force Launches 8th GPS Satellite
China Launches 2nd GPS Satellite
EU Unveils the EGNOS System
Customs Service Introduces Electronic Transit Traceability and Monitoring Technology
Tamil Nadu Government to Outfit PDS Trucks with GPS Devices
Tele Atlas Enters into Agreement with Cobra Electronics
White Electronic Designs Bags GPS Contract
Rockwell Collins Obtains GPS Contract from Air Force
Celevoke Inks Agreement with Value Added Reseller
CSR Signs Conditional Agreement with SiRF Technology Holdings
Telogis Takes Over Darby Corporate Solutions' GPS operations
Grey Island Systems International Buys Assets of FleetPoint & Swiftsure Technologies
Navico International Signs Deal with Brunswick New Technologies
PCTEL Purchases Wi-Sys Communications
Navcom Technology Enters into Partnership with Astrium Services
Trimble and CASIC-IT Signs Agreement
Amaryllo Selects LEADTEK Research to Offer GPS Tracking Solutions
Beijing Meteorological Bureau Selects Topcon Positioning Systems
Topcon Positioning Systems Enters into Partnership with Applied Field Data Systems
SDCORS Chooses Topcon Positioning Systems

CMONOC Selects Topcon Positioning Systems
NVision Solutions Enters into Partnership with Topcon Positioning Systems
Topcon Positioning Systems Partners with Halltech
Colorado Department of Transportation Acquires Topcon GMS-2 Handheld GPS Units
u-blox Acquires Geotate
Tracking Solutions Enters into Partnership with Garmin International
Thor Guard Enters into Partnership with GPS Industries
Raytheon Systems Receives Contract from U.S. Air Force Global Positioning Systems Wing
Furuno Electric Acquires eRide
Saudi Arabian Airlines Chooses Rockwell Collins
EDM Enters into Partnership with eSharing
Magellan Navigation Signs Agreement with MiTAC International
SatNav to Expand Product Portfolio
DriveOK and Procon to Merge
Intrinsyc Software International Entered into Agreement with GPS Technologies Company
China Telecom to Purchase Stake in Unicom-BREW Telecommunication Technologies
Apisphere to Purchase Navit Innovations
Boeing to Incorporate High Integrity GPS technology
Global General Technologies to Expand Partnership with To-Tel-Net
Polaris Acquisition to Take Over Hughes Telematics
u-blox Enters into Partnership with Magna and Paragon
Affiliated Computer Services Takes Over Transportation Management Systems
Celevoke Inks Distribution Agreement with The Real Security Company
Intrinsyc Software International Inks Agreement to Purchase Few Operations and Assets of Destinator Technologies
GPS and GPSi Asia Sign Agreement
Garmin Signs Letter of Intent with Puls Elektronik and Satsignal
SERVICEPower Acquires KonaWare
SK Telecom Purchases Majority Stake in Shenzhen E-eye
Trimble Navigation Takes Over SECO Manufacturing
InterGis Purchases Vericom and NovaTracker
Patriot Energy Buys TelTeck Solutions
Dynamic Natural Resources Buys Universal Tracking Solutions
SGS Purchases Alvey Group
CCS Ceska Acquires Tracker Sro
NXP Purchases GloNav
Garmin Mobile Offers Navigation Services to nTelos Customers

Lockheed Martin Team Bags Contract to Build Next Generation GPS
Raymarine to Buy Finnish Distributor NavSystems
Raymarine Buys DeckMarine
Raytheon Buys Telemus Solutions
SiRF Sells Off SiRF Sweden
SiRF Enters into Contract with Samsung
Trimble and Marvell Enter into Agreement
Istanbul Kultur Universitesi Enters into Contract with Trimble
Falcom Selects u-blox as GPS Engine for New Products
Magellan Complements GPS Devices with Acuterra Maps
Axonn's Satellite Tracking System Incorporates Rocky Mountain Tracking's Software
Apisphere Buys Navit Innovations
Metris to Integrate Sensory Analytics Technology into iGPS Metrology System
Yahoo, Google Partner with GPS Manufacturers
Brilliant Telecommunications Enters into an Agreement with NovAtel
Argo Navigation Merges with NavStar Technologies
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Mio Technology Collaborates With Qualcomm
Garmin International and MapQuest Forge Partnership
Magellan Partners with Primordial
MiTAC International's Mio Technology and Navman Merge with Each Other
Hexagon Acquires NovAtel
Orolia and Rapco Electronics Strike Partnership
GPS Industries Takes Over Assets and Operations of UpLink
Garmin International and Garmin Corporation Extend Agreement with NAVTEQ
Garmin Acquires GPS Gesellschaft
Hemisphere GPS Acquires BEELINE Technologies
Magellan Partners with Zenitron
Raytheon Acquires M-code GPS Receivers Development Contract
Raytheon Acquires System Design Development Contract
SiRF Technology Holdings Acquires Centrality Communications
Effective Control Trucking Acquires Argo Navigation
Vericom Technologies Takes Over Portable Internet
Springbank Resources Consents to Acquire PocketFinder
Broadcom Takes Over Global Locate
Sentex Sensing Technology To Take Over ICOM Holdings
CalAmp Takes Over Aircept.com
ProLink Solutions Acquires Assets and Business of ScoreCast
SK Telecom Acquires 65% Stake in Shenzhen E-eye

Atheros Communications to Purchase u-Nav's Assets and Some Liabilities
SatNav Technologies Introduces GPS Related Software
Nokia Consents to Acquire Navteq
Broadcom Acquires Global Locate

10. FOCUS ON SELECT GLOBAL PLAYERS

Fei-Zyfer, Inc. (USA)
Furuno USA, Inc. (USA)
Garmin International, Inc. (USA)
Hemisphere GPS Inc. (Canada)
ITT Corporation Geospatial Systems (USA)
KVH Industries, Inc. (USA)
MiTAC International Corporation (Taiwan)
Magellan Navigation, Inc. (USA)
Mio Technology Benelux N.V. (Belgium)
Navman New Zealand (New Zealand)
NavCom Technology, Inc. (USA)
NovAtel, Inc. (Canada)
Navico (USA)
Orolia Group (France)
Raytheon Systems Company (USA)
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12. THE UNITED STATES

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Current & Future Analysis

Overview

North American GPS Market for Public/ Military Utility

GPS: Part of US Economic Infrastructure and National Security

Measures Initiated to Upgrade GPS Capabilities

GPS Technology – An Antidote to Growing Needs of US Transportation Industry

AVL Market – A Prime Consumer of GPS/Wireless Devices

GPS and the Trucking Business

Trends

New Application Segments Bring Cheer to the US Market

Consumer Products Propel New Market Growth

Price Declines to Spur GPS-based Navigation System Sales

Manufacturers Focus on Improving Performance/Price Ratio to Spur GPS Navigation System Uptake

Portable GPS Devices Command Rapid Uptake

Technology Advancements Create New Avenues for GPS Application in GSM Mobile Phones

Consumers Show High Interest in Location-based Services

Companies Eye GPS as a Potential Marketing Tool

GPS-Based Mobile Gaming – Fantasy to Reality

Latest GPS Units Come Loaded with Live Traffic Information

Competitive Framework

Table 37. US Market for Personal Navigation Devices (PNDs) (2009): Percentage Market Share Breakdown of Leading Players (includes corresponding Graph/Chart)

Regulatory Environment

Enhanced GPS Receives FAA Approval

FCC Mandates for Carriers

Selective Availability: A Brief Review

Cessation of Selective Availability Enhances Effectiveness of Existing Products

New GPS Policy – Goals and Objectives

Historic Market Share Data: A Review

Table 38. US Non-Cellular GPS Chip Market (2005): Percentage Breakdown of Volume Shipments by Application Type – Vehicle Tracking, Vehicle Navigation, Recreation, Maritime, Military/other, Timing, Surveying, and Aviation (includes corresponding Graph/Chart)

Table 39. US Automotive GPS Market (2003-2007): Penetration Rates (in Cars) of Different GPS Products – Dealer/Factory Navigation Systems, GPS-Enabled PDAs, GPS-Enabled Integrated Devices, and GPS-Enabled Mobiles (includes corresponding Graph/Chart)

Key Regional Players

AerComTec International, Inc.

Raven Industries, Inc.

B. Market Analytics

Table 40. US Recent Past, Current and Future Analysis for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2007 through 2015 in US\$ Million (includes corresponding Graph/Chart)

Table 41. US Historic Review for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/ Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2000 through 2006 in US\$ Million (includes corresponding Graph/Chart)

Table 42. US 11-Year Perspective for Global Positioning System by End Use Application – Percentage Breakdown of Dollar Sales for Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently for the Years 2005, 2010 and 2015 (includes corresponding Graph/Chart)

13. JAPAN

A. Market Analysis

Current & Future Analysis

Car Navigation Systems Market

In-Car Computing Market
Japan's Satellite Navigation Program
B. Market Analytics

Table 43. Japanese Recent Past, Current and Future Analysis for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2007 through 2015 in US\$ Million (includes corresponding Graph/Chart)

Table 44. Japanese Historic Review for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/ Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2000 through 2006 in US\$ Million (includes corresponding Graph/Chart)

Table 45. Japanese 11-Year Perspective for Global Positioning System by End Use Application – Percentage Breakdown of Dollar Sales for Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/ Machine Control), OEM, Aviation, Marine, Military and Timing Independently for the Years 2005, 2010 and 2015 (includes corresponding Graph/Chart)

14. EUROPE

A. Market Analysis

Current & Future Analysis

Galileo Development Program

European Union Launches First GPS Satellite

Market Trends

Galileo to Drive the European GPS Market

Personal Use to Drive GNSS Market

Navigation Systems: No More a Luxury Product

GPS-Enabled Mobile Navigation Devices Increase Penetration

Taiwanese GPS Device Manufacturers Dominate European Markets

Patients and Ambulance Crews to Benefit from Satellite Navigation Systems

Lack of Explicit Regulation for Accurate Positioning of Emergency Calls

TomTom and Garmin Rule the Roost

Table 46. European Market for Personal Navigation Devices (PNDs) (2009):
Percentage Market Share Breakdown of Leading Players (includes corresponding
Graph/Chart)

Key Regional Players

ALLSAT GmbH (Germany)

FALCOM Wireless Communications GmbH (Germany)

Leica Geosystems Holdings AG (Switzerland)

Raymarine Plc (UK)

B. Market Analytics

Table 47. European Recent Past, Current and Future Analysis for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2007 through 2015 in US\$ Million (includes corresponding Graph/Chart)

Table 48. European Historic Review for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/ Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2000 through 2006 in US\$ Million (includes corresponding Graph/Chart)

Table 49. European 11-Year Perspective for Global Positioning System by End Use Application – Percentage Breakdown of Dollar Sales for Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/ Machine Control), OEM, Aviation, Marine, Military and Timing Independently for the Years 2005, 2010 and 2015 (includes corresponding Graph/Chart)

15. ASIA-PACIFIC

A. Market Analysis

Current & Future Analysis

Telematics Market in Asia-Pacific

Overview of Select Markets

Australia

R&D Plays a Major Role

Declining Prices Boost Mobile GPS Systems Market
Satellite Controlled Buses Deal with Traffic Congestion in Sydney
China
Market Overview

Table 50. Chinese Market for Personal Navigational Device (2007): Percentage Market Share Breakdown of Leading Players (includes corresponding Graph/Chart)

An Emerging Space Power
China to Partner EU in Galileo Development
Major Application Markets
Increasing Need for GPS Tracking Solutions
Handheld GPS Market – An Overview
GPS-Enabled PMP and PDA Market
Telematics Market in China
Japanese Navigation System Brands Gain Advantage
Traffic Management – A Major Driving Force for Telematics Growth
Hong Kong
OEM Software – The Mainstay for Hong Kong GPS Companies
India
Market Overview
GPS Market to Witness Faster Growth
Government Participation in GPS Technology
Telematics Market in India
Market Trends
Luxury Cars Drive Demand for GPS Navigation Systems
In-Car Navigation Systems Market Offers Growth Potential
Expensive GPS-Enabled Cell Phones Limit Adoption
New Zealand
New Zealand to Get Expanded GPS Network Coverage
South Korea
Traffic Management and Continuous Internet Connectivity Drive Telematics Market
Taiwan
Market Overview
Exports the Mainstay
Manufacturers Increasingly Integrate Multimedia Features on Handheld GPS Receivers
Domestic Players Dominate the Market
Adoption of Telematics Devices

Advanced Technology: Playing a Major Role
Declining Retail Prices Boost Demand for GPS-Enabled Devices
Key Regional Players
Inventec Appliances Corp. (Taiwan)
Leadtek Research Inc (Taiwan)
B. Market Analytics

Table 51. Asia-Pacific Recent Past, Current and Future Analysis for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2007 through 2015 in US\$ Million (includes corresponding Graph/Chart)

Table 52. Asia-Pacific Historic Review for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2000 through 2006 in US\$ Million (includes corresponding Graph/Chart)

Table 53. Asia-Pacific 11-Year Perspective for Global Positioning System by End Use Application – Percentage Breakdown of Dollar Sales for Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/ Machine Control), OEM, Aviation, Marine, Military and Timing Independently for the Years 2005, 2010 and 2015 (includes corresponding Graph/Chart)

16. REST OF WORLD

A. Market Analysis
Current & Future Analysis
Overview of Select Markets
Canada
The Geo-Spatial Market
CDGPS Aids in Navigation and Geo-Referencing
B. Market Analytics

Table 54. Rest of World Recent Past, Current and Future Analysis for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation,

Consumer, Survey/Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2007 through 2015 in US\$ Million (includes corresponding Graph/Chart)

Table 55. Rest of World Historic Review for Global Positioning System by End Use Application – Land Based (In-Vehicle Navigation, Consumer, Survey/ Mapping and Tracking/Machine Control), OEM, Aviation, Marine, Military and Timing Independently Analyzed by Annual Revenues for the Years 2000 through 2006 in US\$ Million (includes corresponding Graph/Chart)

Table 56. Rest of World 11-Year Perspective for Global Positioning System by End Use Application – Percentage Breakdown of Dollar Sales for Land Based (In-Vehicle Navigation, Consumer, Survey/Mapping and Tracking/ Machine Control), OEM, Aviation, Marine, Military and Timing Independently for the Years 2005, 2010 and 2015 (includes corresponding Graph/Chart)

Competition

Total Companies Profiled: 133 (including Divisions/Subsidiaries - 146)

Region/Country/Players

The United States

Canada

Japan

Europe

France

Germany

The United Kingdom

Spain

Rest of Europe

Asia-Pacific (Excluding Japan)

Latin America

Middle-East

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