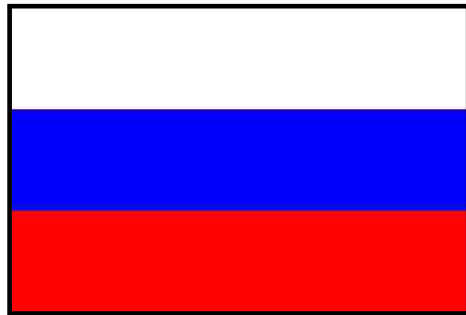
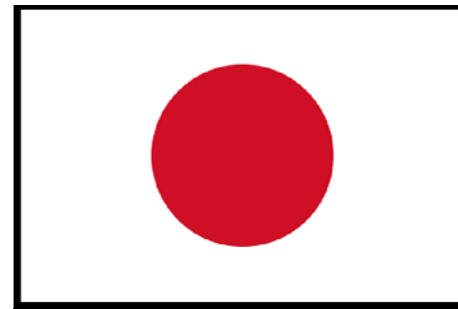


# Telecommunication and Navigation Innovations for Japanese Market



**SPIRIT Telecom** 



# SPIRIT is Global Innovation Leader

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- Part of SPIRIT group of companies, developing voice, video, audio, telecom software products
- Member of **GLONASS/GNSS Forum**
  - **GLONASS/GNSS Forum unites 30 developers and manufacturers of navigation applications and equipment**
- **16** years on the market
- **12** years of navigation experience
- **140** focused professionals, **70** engineers, **15** PhDs
- Sales representatives in **12** countries, including **Japan**



# SPIRIT Experience in Japan

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- SPIRIT operates in Tokyo since 1994
- Extensive experience with Japanese companies
- Navigation products
  - NEC, JRC, Furuno
- Products for mobile handsets-
  - FOMA, NTT DoCoMo
  - A55, KDDI au
- Audio
  - Denon&Marantz Professional, Toshiba



# SPIRIT Has 200 Global Customers



# Selected Case Studies

Navigation

Audio

Speech

Customer:

**NEC**

**TOSHIBA**

 **KYOCERA**

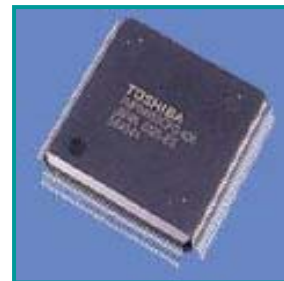
SPIRIT solution:

8 channel  
software GPS  
receiver

audio  
products

speech  
enhancement  
products

End product:



GPS receiver

TX49xx chip

PHS base station

# SPIRIT for Japanese Market: Cooperation Areas

GPS+GLONASS  
navigation



Voice and video over  
IP and 3G networks  
for mobile handsets



# Why Cooperation in GLONASS is Important?

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## Benefits of combined GPS+GLONASS navigation

- **Reliable** positioning even if one of the systems is down (like GPS was during military operations in Iraq)
  - Future steps – combined solutions, using **3** or more navigation systems: Europe's **Galileo**, Japan's **QZSS**
- More stable performance in locations with restricted visibility
- Navigation market revenues are expected to reach **€60B** by 2010, and **€200B** by 2011





# SPIRIT Navigation Offering

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DuoStar baseband software is the basis for a baseband chip or hardware GPS+GLONASS receiver design

- Complete, reliable, already deployed product
- Usage of both worldwide navigation systems: GPS and GLONASS

## Results:

- High accuracy **5 m** (autonomous), **1 m** (differential)
- Quick start **4 c** (hot start), **30 c** (cold start), **1 c** (reacquisition)
- Reliability



# Next-generation Mobile Handsets: the Dream Gadget

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## What do consumers want from their cell phones?

- Internet browsing
- Camera
- Audio playback
- VoIP
- Games
- Navigation, etc.



# SPIRIT Mobile VoIP Offering

## Voice and video communication over IP and 3G networks

- Available on **mass-market** handsets
- **Complete** solution
- SIP support for **interoperability** with PC softphones
- **Video**



voice, audio, video



# SPIRIT Mobile Voice and Video Already Deployed by:

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Asian OEM behind Sony Ericsson and i-Mate



World's largest mobile OEMs for Windows based handhelds



OEM behind Motorola and Fujitsu Siemens



World's largest portable devices OEM



# Japan + Russia = Good SPIRIT

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## SPIRIT is looking for new partners in Japan

To learn more visit our web-sites: [www.spiritdsp.com](http://www.spiritdsp.com)  
[www.spirit-telecom.ru](http://www.spirit-telecom.ru)

GLONASS/GNSS Forum: [www.aggf.ru](http://www.aggf.ru)