



# NDGPS Study

Is There A Place For NDGPS In The Future?

# **New Market Trends**

**The GPS industry will continue to search, learn, and harness the power of the current GPS and GPS augmentation systems and then quickly look for new ways to capture more performance from these same systems.**

# Research On GPS Market Trends



# Companies Marketing Low Strength GPS Receivers

- **CSI (SBX-4)**
- **NavSync (CW25) 155dBm**
- **Navman (Jupiter 30) 160dBm**

# **Companies Marketing Low Strength GPS Receivers With DR Capabilities**

- **U-Blox AG (TIM – 4R)**
- **Trimble (Lassan DR+GPS)**

# Low Strength GPS + Augmentation

## What Will Be The Augmentation Source?

- **WAAS**
- **RTK Base Stations**
- **L-Band Providers**
- **NDGPS**

# What Augmentation Source ?

- **Satellite Based**
- **Ground Based**
- **New Augmentation**

# User Groups Surveyed

**500 Users In Each Category Surveyed**

## **Consumer:**

- **Automotive**
- **Outdoor Activities**

## **Professional**

- **Emergency Services**
- **Agriculture**
- **Government Agencies**

## **Automotive Safety**

# **What Will Be The Requirements For The Development Of New Markets?**

**Based On Consumer Products To Be Purchased. GPS Augmentation Must Be Available 85% Of The Time.**

**Based On Professional Products To Be Purchased. GPS Augmentation Must Be Available 85% Of The Time.**

**Based On Automotive Safety Products To Be Purchased. GPS Augmentation Must Be Available 90% Of The Time.**

# NDGPS Testing

## Interstate 95 Test

- **WAAS Availability: 72%**
- **NDGPS Availability: 96%**

## Rt. 460 Road Test:

- **WAAS Availability: 69%**
- **NDGPS Availability: 93%**

## Richmond VA. Road Test

- **WAAS Availability: 47%**
- **NDGPS Availability: 89%**

## Surry VA. Farm Test:

- **WAAS Availability: 78%**
- **NDGPS Availability: 94%**

Information Source: SEAM 2005

	<u>Con.</u>	<u>Prof.</u>	<u>Safety</u>
<b>Interstate 95 Test</b>			
• WAAS Availability: 72%	85	85	90
• NDGPS Availability: 96%	85	85	90
<b>Rt. 460 Road Test:</b>			
• WAAS Availability: 69%	85	85	90
• NDGPS Availability: 93%	85	85	90
<b>Richmond VA. Road Test</b>			
• WAAS Availability: 47%	85	85	90
• NDGPS Availability: 89%	85	85	90
<b>Surry VA. Farm Test:</b>			
• WAAS Availability: 78%	85	85	90
• NDGPS Availability: 94%	85	85	90

# **NDGPS Trends**

## **Market Survey Shows A Slight Increase In NDGPS Usage**

- **Federal Agencies**
- **State Agencies**
- **Survey, Highway Planning And GIS**
- **Agricultural Applications**

# Conclusion Of NDGPS Future

**As GPS applications move into more low signal strength areas, NDGPS will be needed to allow the creation of new GPS markets and to expand our ability to capture the power of GPS technology.**