

# ■ Dansk Aktionærforening Århus



Henrik Lunde, COO  
John Alexandersen, IR Manager

Thrane & Thrane  
**Thrane**

## ■ Important Notice

02-01-2003

- During the course of this presentation, we may make certain forward-looking statements. These forward-looking statements represent the company's internal projections, expectations or beliefs concerning, among other things, future operating results and various components thereof or the company's future economic performance.

We would like to caution you that actual results might differ materially from those projected in the forward-looking statements that we may make today. Such projections, expectations or beliefs involve known and unknown risks and uncertainties that may cause Thrane & Thrane's actual performance and financial results in future periods to differ materially from any estimates or projections of future performance or results expressed or implied in the statements that we make today.

This presentation has been prepared and shall be construed in accordance with Danish law.

# ■ Presentation Overview

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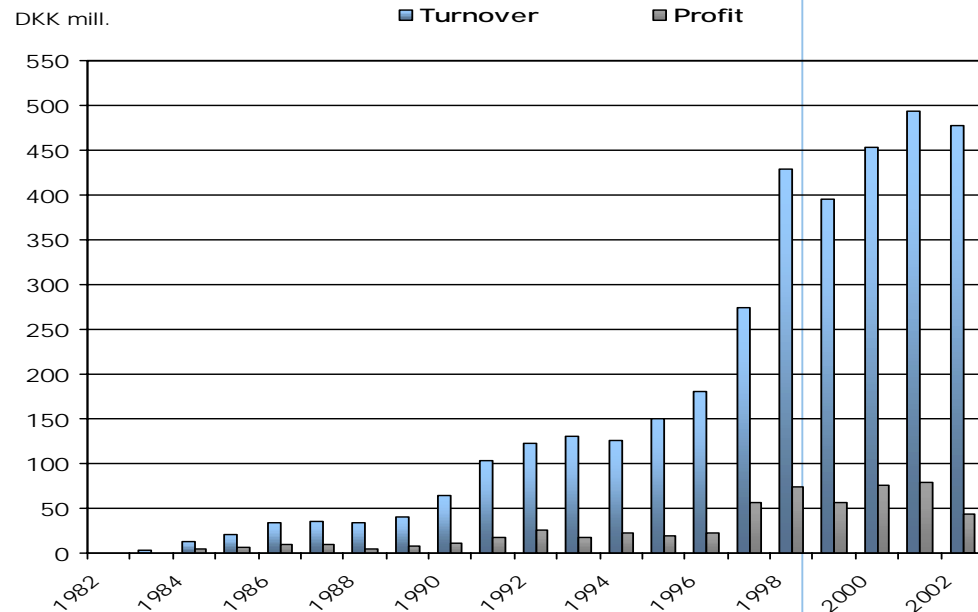
- The background of Thrane & Thrane
- Thrane & Thrane today
- The future for Thrane & Thrane
- Conclusion



# History

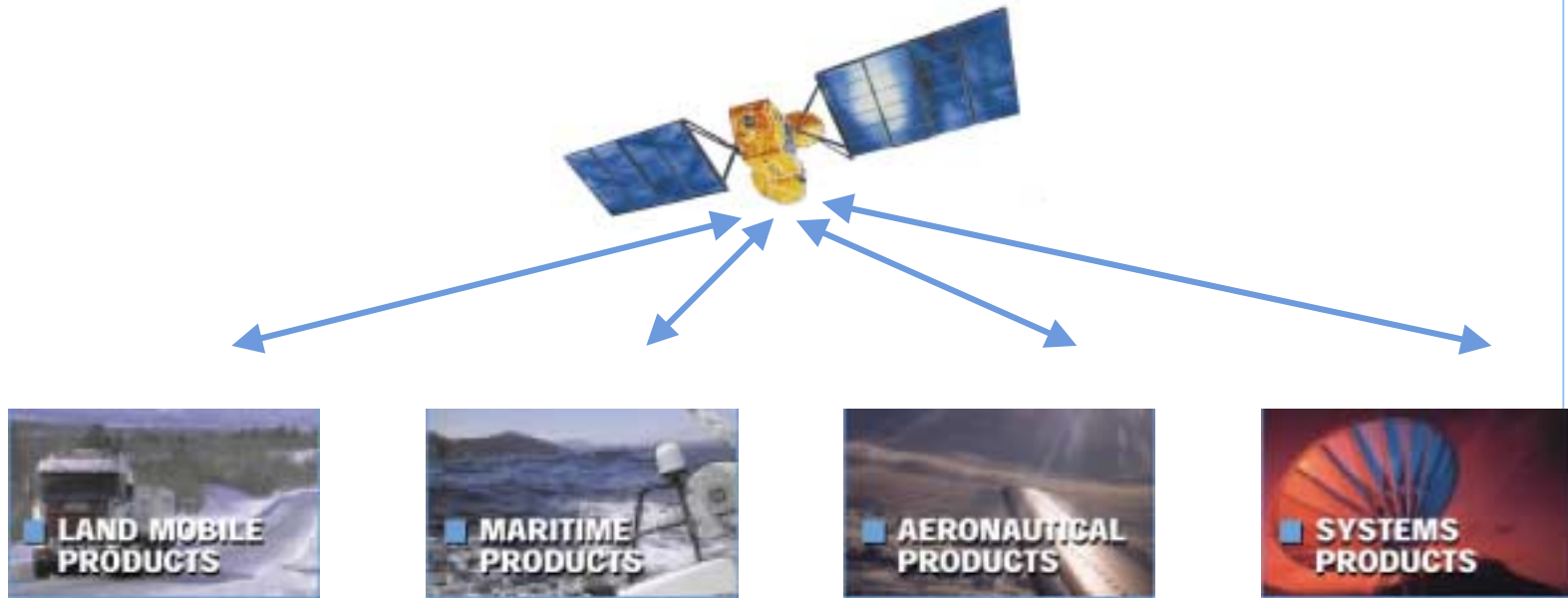
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- Thrane & Thrane was incorporated in 1981 by the two brothers Lars and Per Thrane
- Company growth has been based on new product introductions
- New investments in product development are only made when the money are earned
- In March 2001, the company was introduced at the Copenhagen Stock Exchange
- Today, Thrane & Thrane is one of the world's leading manufacturers of equipment for mobile satellite communication



# ■ Mobile Satellite Communication - Applications

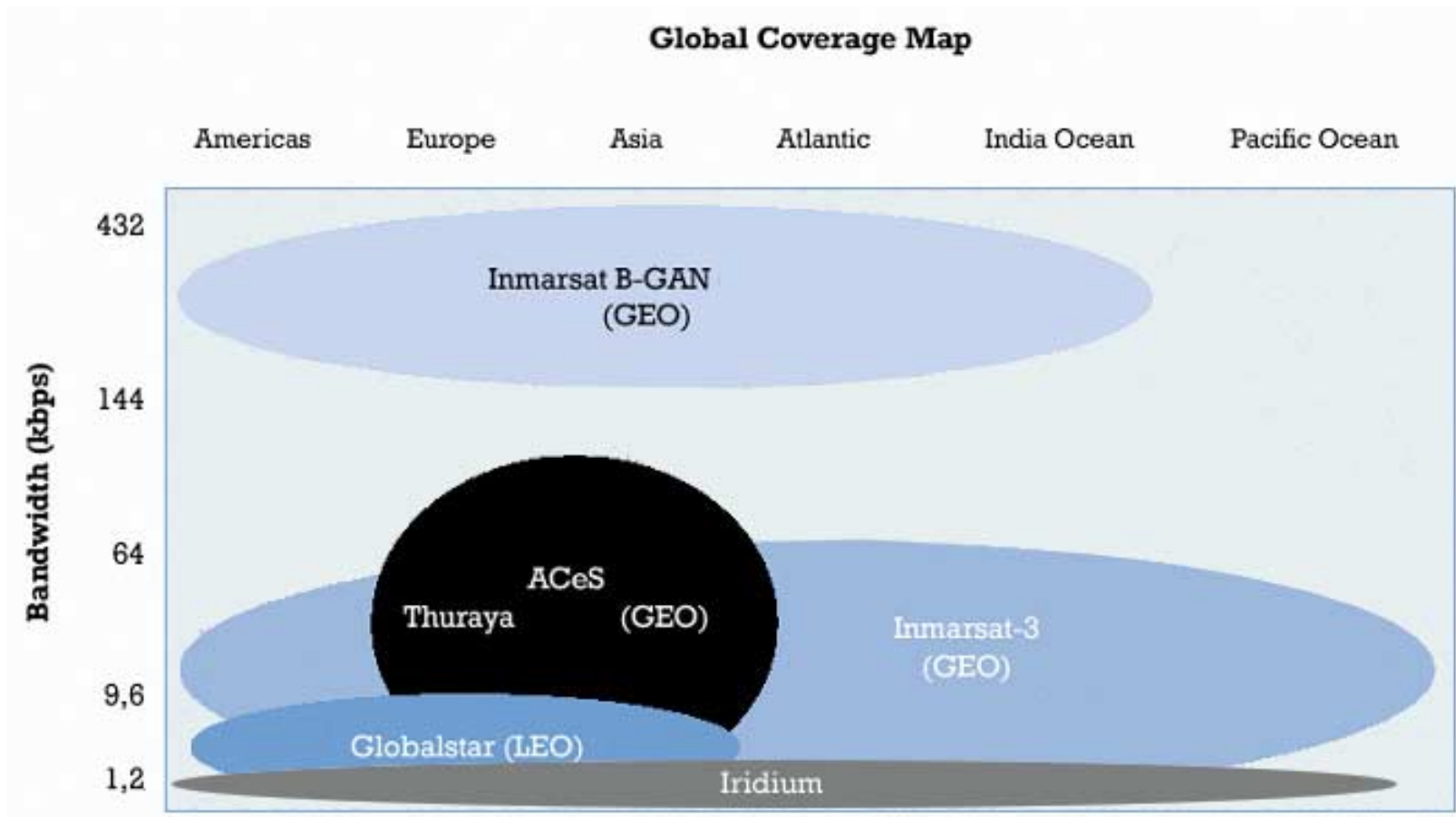
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- Personal communication services (voice, fax, e-mail, data)
- Remote network access (Internet and intranet)
- Safety (GMDSS) and security
- Tracking and positioning


# Major Mobile Satellite Systems

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## ■ Inmarsat Now and in the Future

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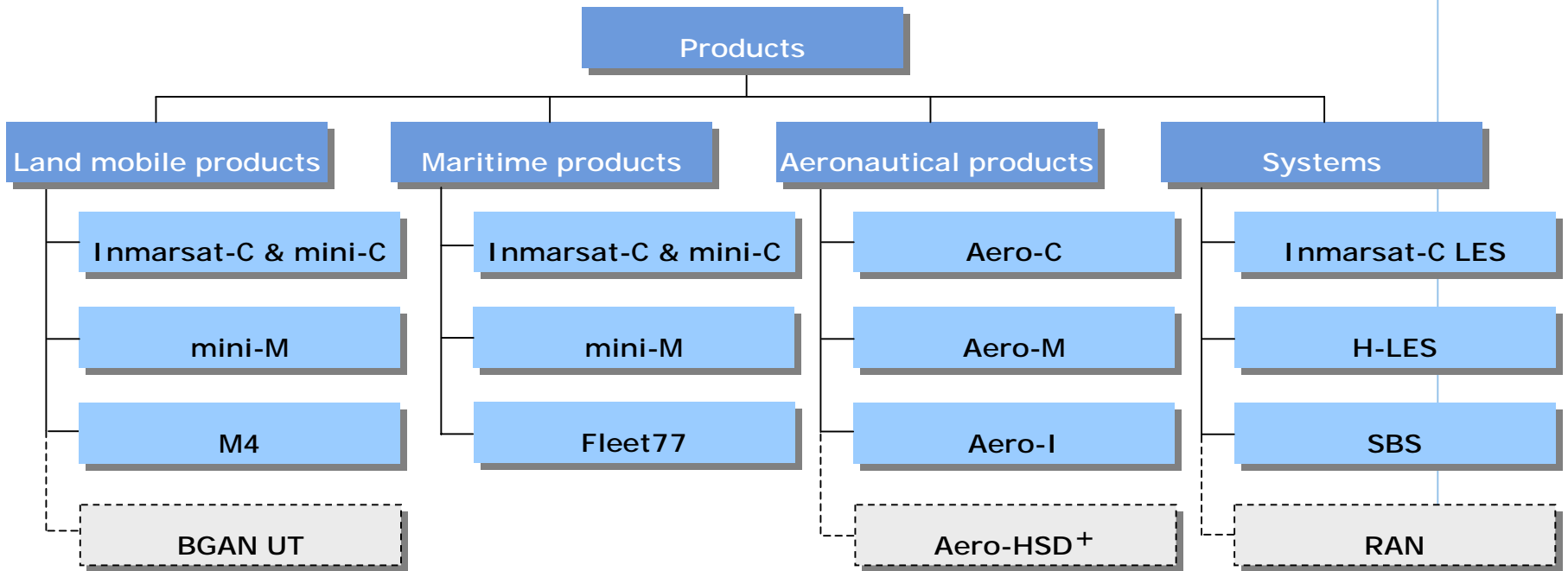
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- **1979:** Inmarsat incorporated as a provider of maritime safety distress services
  - **1982:** First service launched
  - **1990:** Inmarsat-C launched
  - **1996:** Inmarsat 3
  - **1999:** Inmarsat privatised
  - **2002:** Approximately 243,000 terminals in operation of which 87,000 are from Thrane & Thrane
  - **2004:** The fourth generation of Inmarsat will be launched. Data speed up to 432 kbps. Compatible with existing services



Inmarsat is the only successful global mobile satellite operator

# ■ Thrane & Thrane Product Portfolio

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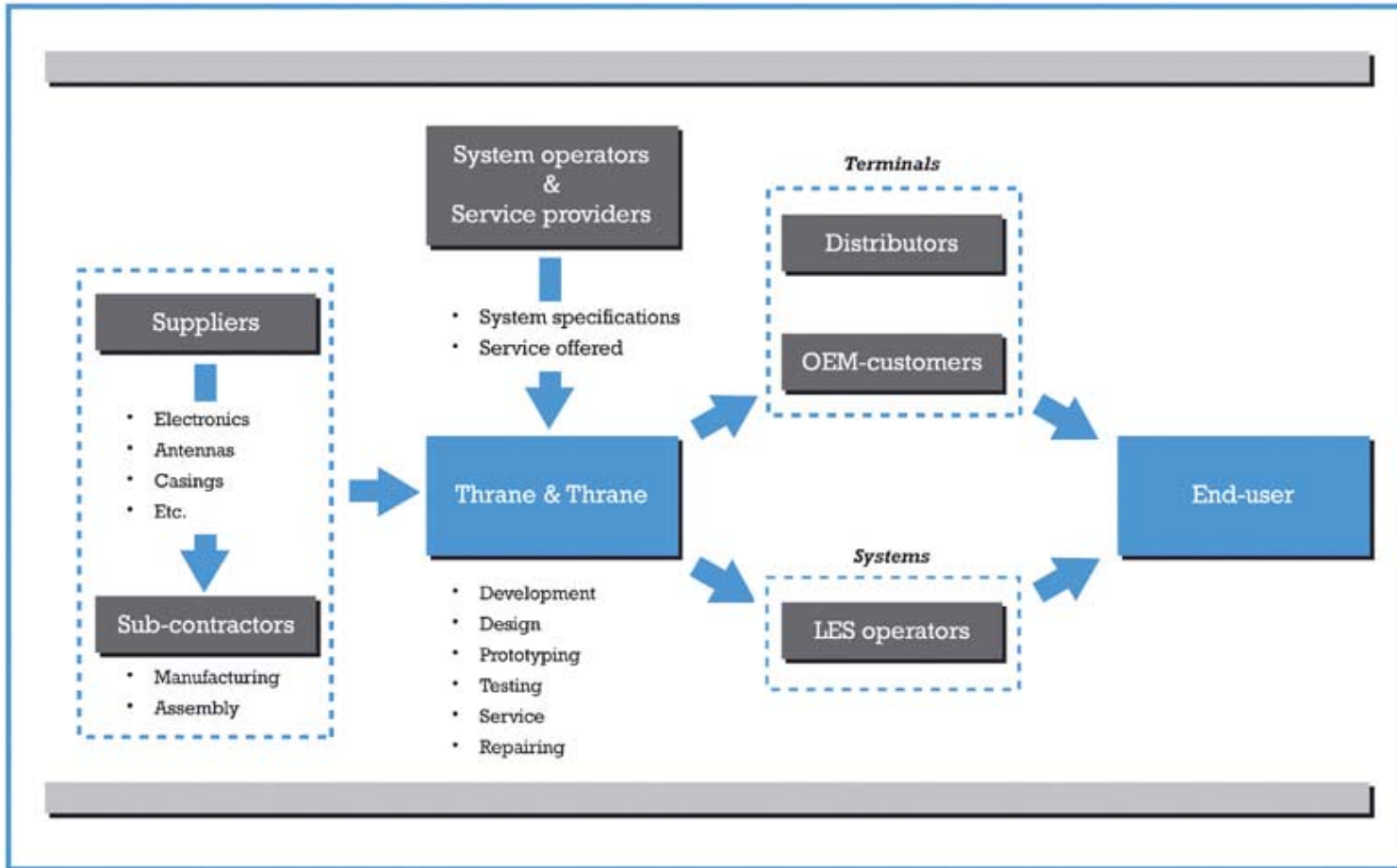


- Thrane & Thrane has strengthened its market position through
  - Introduction of two new major products (mini-C and Fleet77)
  - Three strategically important development projects



# ■ Thrane & Thrane Business Model

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## ■ Land Mobile Market

- Typical customers are corporations, international aid organisations, government, media, oil and mining companies
- In 2001/02 the M4 market grew 65% partly due to considerations of security policy following the September 11. This has also affected sales positively in the first six months of 2002/03
- Thrane & Thrane has high expectations to the newly launched mini-C targeting a 2001 market of approx. 50,000 terminals in the U.S. and South America
- Currently 25 North and South American fleet tracking integrators have agreed to test the mini-C of which approximately 10 have purchased a total of 1,000 terminals
- A framework agreement has been entered into with a Brazilian customer on delivery of 4,800 mini-C terminals of which 1,200 terminals have been delivered



## ■ Maritime Market

- The maritime products are typically used for merchant and fishing vessels as well as large pleasure crafts
- As the first manufacturer Thrane & Thrane introduced in March 2002 the Fleet77 targeting a market estimated to DKK 250 mill. annually
- Fleet77 will penetrate the maritime high-speed market
  - Retrofit of Inmarsat-A/B terminals on merchant ships and fishery boats
  - Focus on the mega yacht segment in the U.S.
  - Integrate with OEM customers in pursuing the merchant new build market in Asia
- Sales of the Fleet77 terminal has been satisfactorily in the first six months of 2002/03
- In addition, focus on use of mini-C and mini-M terminals for crew communication



## ■ Aeronautical Market

- Thrane & Thrane's aeronautical products are typically installed in small corporate and private jets and military airplanes
- Market conditions have been steady during the last four quarters
- The aeronautical market is still considered a growth opportunity and Thrane & Thrane is moving forward in developing a high-speed product for **small** business jets
- A contract has been entered into regarding development and production of a high-speed unit. The unit integrates with Honeywell & Thales' Inmarsat Aero-H/H<sup>+</sup> aeronautical satellite communication system for **large** business jets and military transport airplanes
- The two products to be introduced in 2003/04 will provide Thrane & Thrane with access to a new market estimated to DKK 250 mill. annually



## ■ Systems Market

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- Thrane & Thrane develops, manufactures and markets system products
  - Systems have been in the product portfolio since 1985
  - Systems are developed and sold on an order basis
- Thrane & Thrane has delivered 13 of the existing 22 Inmarsat-C land earth stations. These 13 land earth stations handle approx. 80% of the Inmarsat-C traffic
- The company's latest product is Satellite Base Stations for Inmarsat's MPDS (Mobile Packet Data Service). The initial contract of DKK 27.5 mill has more than doubled
- A DKK 415 mill. contract for development, production and installation of the RAN (Radio Access Network) for Inmarsat's future BGAN system was won in August 2001



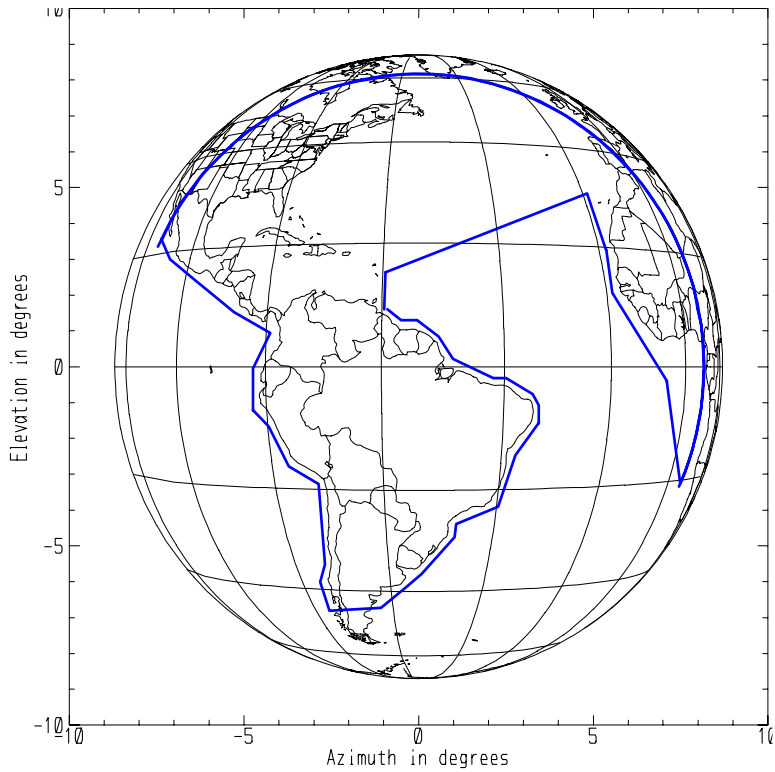
## ■ The Future - BGAN

- Inmarsat system planned to be launched in 2004
- Three satellites from Astrium (one ground spare)
- Covers most of the world's land masses
- Four RAN sites
- Air interface based on Thrane & Thrane's MPDS technology
- Transmission rates up to 432 kbps
- Will be integrated with UMTS services
- UMTS core network equipment from Ericsson
- Complements fixed terrestrial and cellular mobile networks

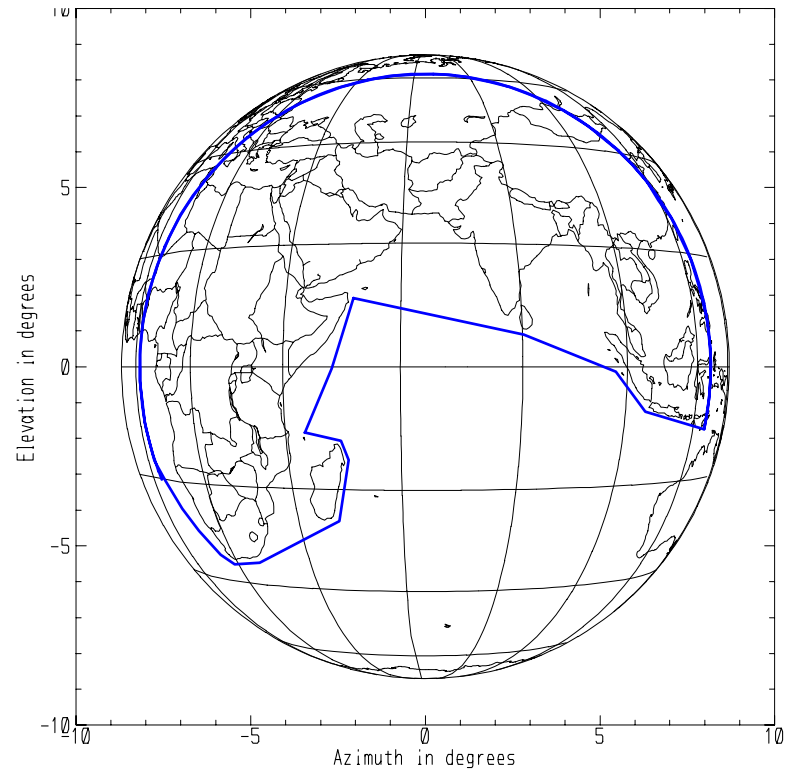


# ■ BGAN System - Expected Coverage

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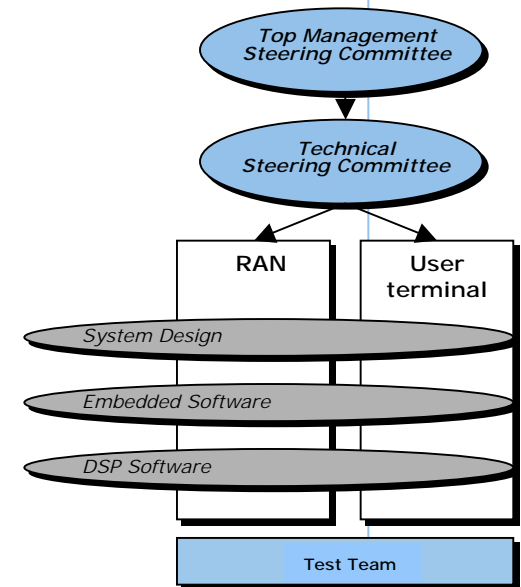
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## ■ Radio Access Network (RAN)

- In August 2001, Thrane & Thrane won a DKK 360 mill. contract for development, production and installation of the RAN for Inmarsat's future BGAN system
- Amendment contracts of DKK 55 mill. has been concluded with Inmarsat following the initial contract
- Approximately 65 engineers are currently involved in developing the RAN which shall be in operation in 2004
- Development of the RAN for Inmarsat's BGAN system represents a strategic advantage
- Integration of the RAN and the BGAN user terminal development will reduce development time and cost



## ■ BGAN Terminal

- In February 2002, Thrane & Thrane won a DKK 125 mill. contract for development and production of a BGAN user terminal and a user terminal core module
- Terminal development contracts have also been awarded to Nera SatCom, Hughes Network Systems and Addvalue Technologies
- The user terminal will target users within the land mobile segment e.g. international aid organisations, the media, oil and gas companies etc.
- Users are also expected to be attracted by BGAN's UMTS services in addition to reduced terminal and airtime prices
- Annual turnover of the user terminal is estimated to be between DKK 200 - 250 mill. when introduced by end 2004



# ■ Development of Terminal & Core Module

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- Core module
  - Development costs of DKK 125 mill.
  - Need for ASICs to reduce terminal size and costs
  - Use of ASICs increases the development costs
  - 30 engineers involved in development
  
- User terminal
  - Based on core module
  - Development costs of DKK 40 mill.
  - 15 engineers involved in development
  
- Development of the user terminal and core module will require more than 120 man-years



## ■ Financial Summary H1 2002/03

02-01-2003

(mDKK)	H1 2002/03	H1 2001/02	12 months 2001/02
Land mobile	104.4	71.7	159.9
Maritime	98.1	63.8	137.9
Aeronautical	20.7	11.9	33.9
Systems	91.9	50.7	145.1
<b>Total turnover</b>	<b>315.1</b>	<b>198.1</b>	<b>476.8</b>
Development costs	20.2	20.5	37.9
Operating profit	41.7	6.3	42.5
<b>Profit for the period</b>	<b>26.9</b>	<b>5.2</b>	<b>25.9</b>
Investments in development projects	11.7	25.3	46.6

- Thrane & Thrane experienced an increase in turnover in all segments for the first six months of 2002/03 relative to 2001/02
- Total turnover for the first six months improved by 59% and operating profit (EBIT) reached the same level as for the full 12 months of 2001/02

## ■ Conclusion

- Thrane & Thrane has a strong financial track-record with strong growth and positive profit every year since 1982
- In 2002/03 turnover is expected to increase by 30-35% to DKK 620-640 mill. whereas operating profit is expected to increase by 80-100% to DKK 75-85 mill.
- The already strong market position will be further strengthened in the coming years, particularly driven by:
  - The Fleet77 maritime high-speed terminal
  - The mini-C tracking terminal
  - Aeronautical high-speed systems
  - The RAN for Inmarsat's future BGAN system and
  - The user terminal for the BGAN system
- These products are the foundation for Thrane & Thrane's future growth in sales and earnings



