

## ■ Alfred Berg Danish Small Cap Seminar



Thrane & Thrane A/S  
April 1, 2003

Lars Thrane, CEO

Thrane & Thrane  
**Thrane**

## ■ Important Notice

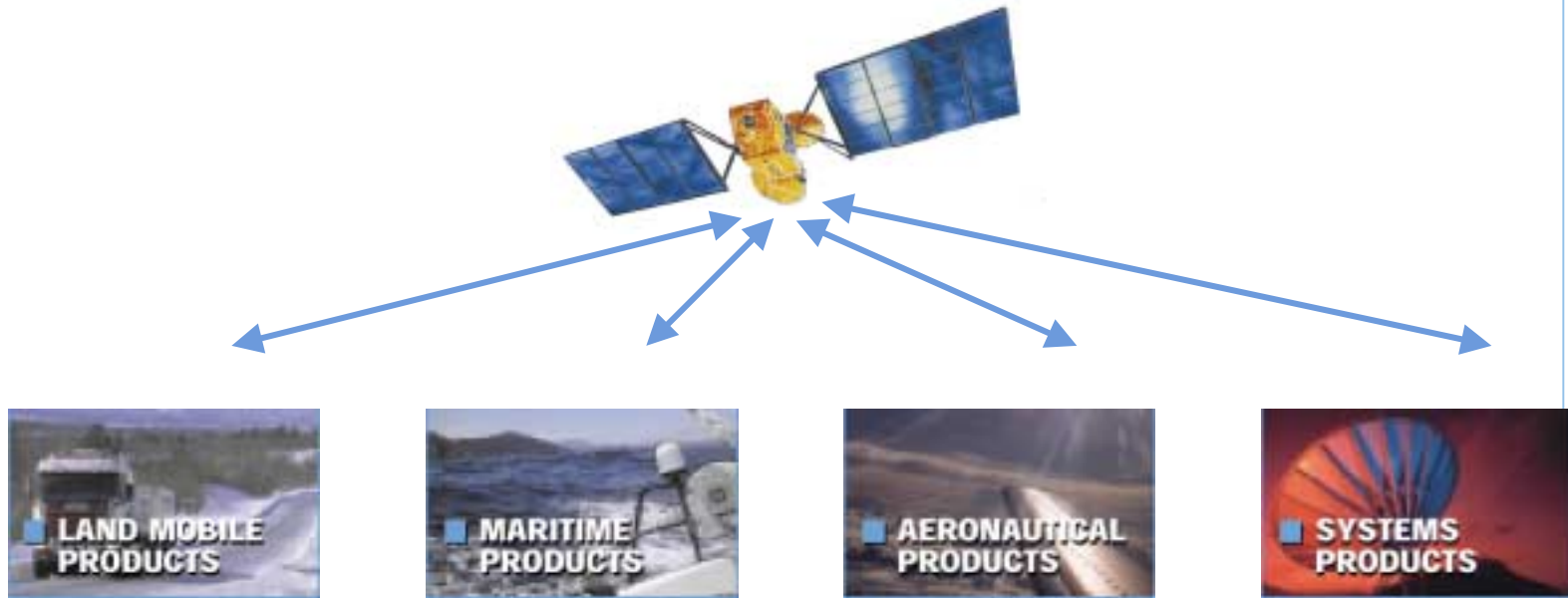
- During the course of this presentation, we may make certain forward-looking statements. These forward-looking statements represent the company's internal projections, expectations or beliefs concerning, among other things, future operating results and various components thereof or the company's future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

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# ■ Mobile Satellite Communication - Applications

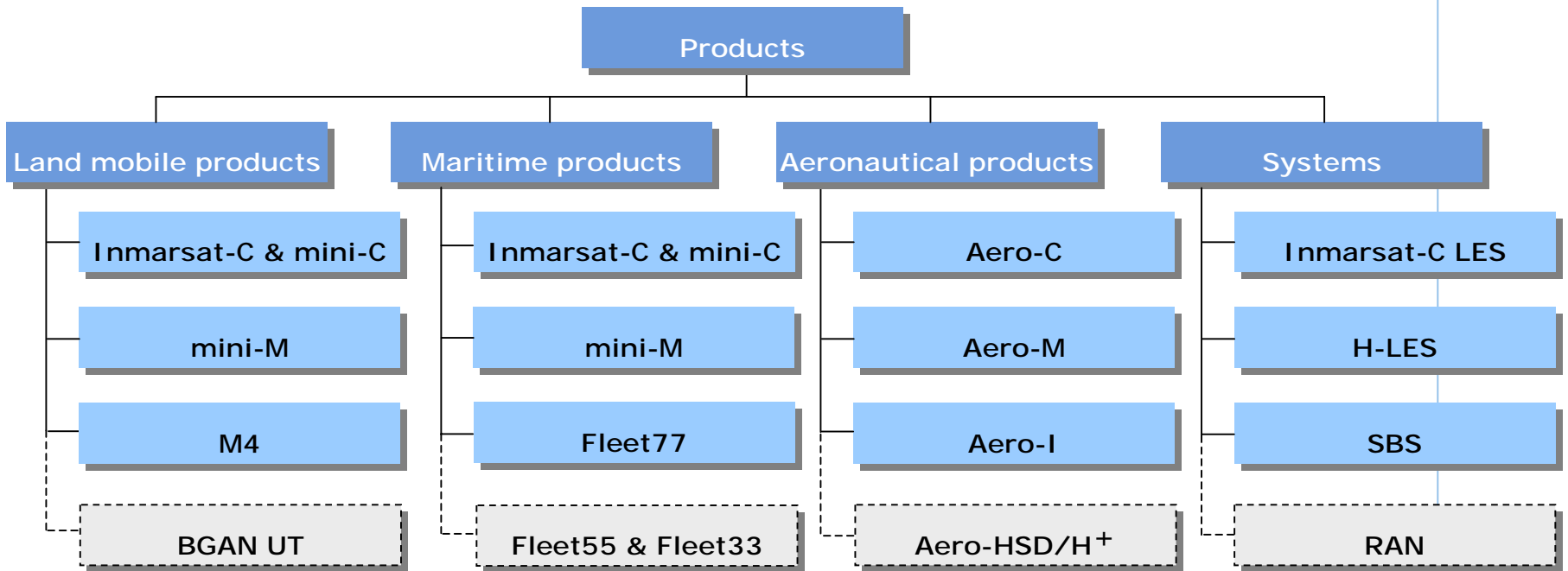
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- Personal communication services (voice, fax, e-mail, data)
- Remote network access (Internet and intranet)
- Safety (GMDSS) and security
- Tracking and positioning

# Thrane & Thrane Product Portfolio

01-04-2003



- Thrane & Thrane has a strong presence in all segments within mobile satellite communication
- The product strategy is characterised by reuse of technology across market segments



## ■ Segment Turnover

01-04-2003

(mDKK)	YTD Q3 2002/03	YTD Q3 2001/02	YTD Q3 Change	Year 2001/02
Land mobile	156.6	120.3	30%	159.9
Maritime	124.6	89.9	39%	137.9
Aeronautical	26.9	19.8	36%	33.9
Systems	148.1	86.4	71%	145.1
<b>Total turnover</b>	<b>456.2</b>	<b>316.4</b>	<b>44%</b>	<b>476.8</b>
<b>Profit for the period</b>	<b>35.6</b>	<b>6.0</b>	<b>493%</b>	<b>25.9</b>

- Increase in turnover and profit is primarily driven by new product introductions
- For the full year 2002/03 turnover is expected to be DKK 570-585 mill. with an operating profit in the the low end of the DKK 75-85 mill. range

## ■ Land Mobile Market

- Land mobile products include portable terminals (mini-M and M4) and tracking terminals (Inmarsat-C and mini-C)
- The products offer voice, fax, security, positioning and data communication (up to 64 kbps). Customers include corporations, international aid organisations, transportation, government, media, oil and mining companies
- Thrane & Thrane's mini-M and M4 market shares are between 40-50%. Primary competitor is Nera SatCom (Norway)
- The goal for the mini-C terminal introduced by end 2001 is to get a foothold in the Americas – the worlds largest markets for tracking terminals
- Product development focus is currently on the BGAN terminal to be introduced in 2005
- The terminal will target existing users within the land mobile segment. Users are also expected to be attracted by BGAN's UMTS services in addition to reduced terminal and airtime prices
- Annual turnover of the BGAN terminal is estimated to DKK 250 mill.



## ■ Maritime Market

- Maritime products include Inmarsat-C, mini-C, mini-M and Fleet77 terminals
- The products offer voice, fax, safety, positioning and data communication with transmission speeds up to 64 kbps. Merchant and fishing vessels as well as large private yachts are typical customers
- Market shares for Inmarsat-C and mini-M are approx. 50-55%. The objective for Fleet77 is to gain minimum one third of the maritime high-speed market estimated at DKK 250 mill. annually
- Primary maritime competitors include Nera SatCom (Norway), Furuno (Japan) and JRC (Japan)
- Development of two new terminals, Fleet55 and Fleet33, has been initiated. The terminals will target the markets for private yachts, coast guard vessels and fishing vessels
- Fleet55 and Fleet33 are expected to be introduced in spring 2003 and by the of 2003, respectively



## ■ Aeronautical Market

- The aeronautical products including Aero-C, Aero-M and Aero-I offer voice, fax, positioning and low speed data communication
- Products are typically installed in small corporate and private jets, helicopters and military airplanes
- Market shares for Aero-C, Aero-M and Aero-I are 100%, 85% and 45%, respectively. Primary competitors include Rockwell Collins (USA), Honeywell (USA), Thales Avionics (France) and EMS Technologies (USA)
- Development focus is on a new high-speed terminal (64 kbps) targeting the small business jets market
- Simultaneously, a high-speed unit is being developed for Honeywell/Thales targeting the market for large business jets and military airplanes. First customer shipment is expected in the beginning of the 2003/04 financial year
- The two high-speed products to be introduced in 2003/04 will provide Thrane & Thrane with access to a market estimated to DKK 250 mill. annually



## ■ Systems Market

- Thrane & Thrane develops, manufactures and markets system products: Inmarsat-C LES, H-LES and SBS. Systems are developed and sold on an order basis
- Delivered 13 of the existing 22 Inmarsat-C LES (land earth station). The 13 LES handle approx. 80% of the Inmarsat-C traffic
- The latest product is Satellite Base Stations (SBS) for Inmarsat's MPDS (Mobile Packet Data Service) – allows the user to be constantly online and only be charged for the amount of data transferred
- Development focus is currently on the Radio Access Network (RAN) project. RAN will become a key element in Inmarsat's BGAN satellite system to be introduced in 2005
- The total value of the RAN contract is DKK 438 mill. of which DKK 205 mill. has already been recognised
- The majority of the remaining part of the contract will be recognised during 2003/04 and 2004/05. The RAN contract runs until 2005/06



## ■ Product Development

- Thrane & Thrane's growth is based on product development. However, new investments in product development are only made when cash has been earned
- A key driver in product development is the increasing need for high-speed data. This need is reflected in all new products – Fleet55 and Fleet33, the aeronautical high-speed terminals and the future BGAN terminal
- Development of the new BGAN terminal is for the first time based on a core module. Using a core module represents a strategic advantage since it can be used for development of other terminal types (different sizes, other market segments etc.)
- The BGAN terminal will also be the first terminal containing ASICs. Using ASICs increases development costs but reduces terminal size and production costs
- Approximately 35 engineers are currently involved in development of the BGAN terminal and the core module while 65 engineers are involved in developing the RAN



# ■ Product Development Overview

01-04-2003

Product	Market	Launch
Fleet55 terminal	Maritime	Spring 2003
Fleet33 terminal	Maritime	End 2003
Aeronautical high-speed unit	Aero	Q1 2003/04
Aeronautical high-speed terminal	Aero	Q3 2003/04
BGAN terminal core module	All	2004
BGAN terminal	Land mobile	2005
RAN	Systems	2004/05

- Approximately 210 of Thrane & Thrane's 375 employees are involved with product development
- Development costs amount to approximately 15% of the company's total turnover



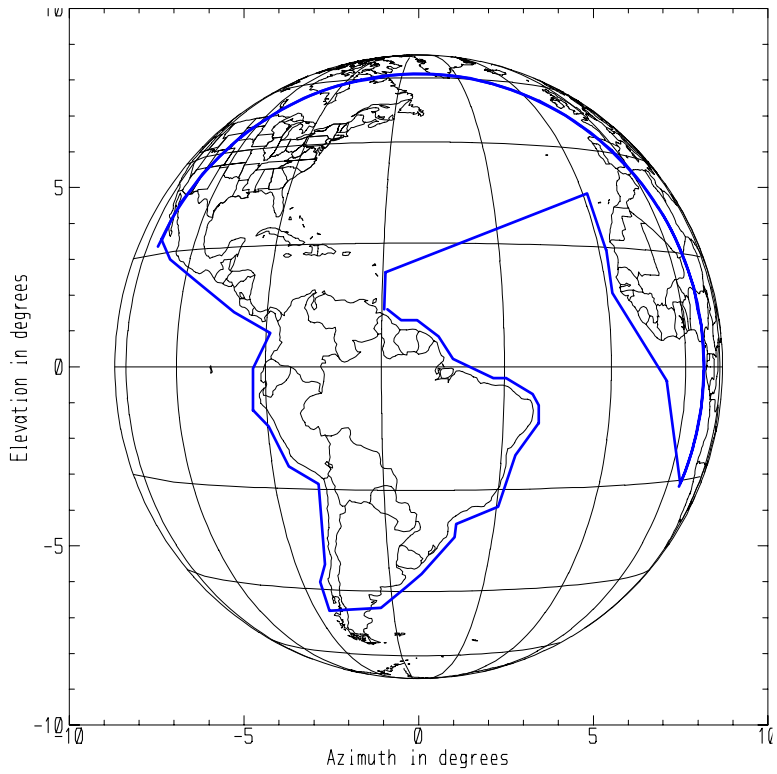
## ■ BGAN in Brief

- Inmarsat system planned to be launched in 2005
- 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
- Integration with UMTS services
- UMTS core network equipment from Ericsson
- Terminals to be supplied by Thrane & Thrane (DK), Nera SatCom (N), Hughes Network Systems (US) and AddValue Technologies (SG)

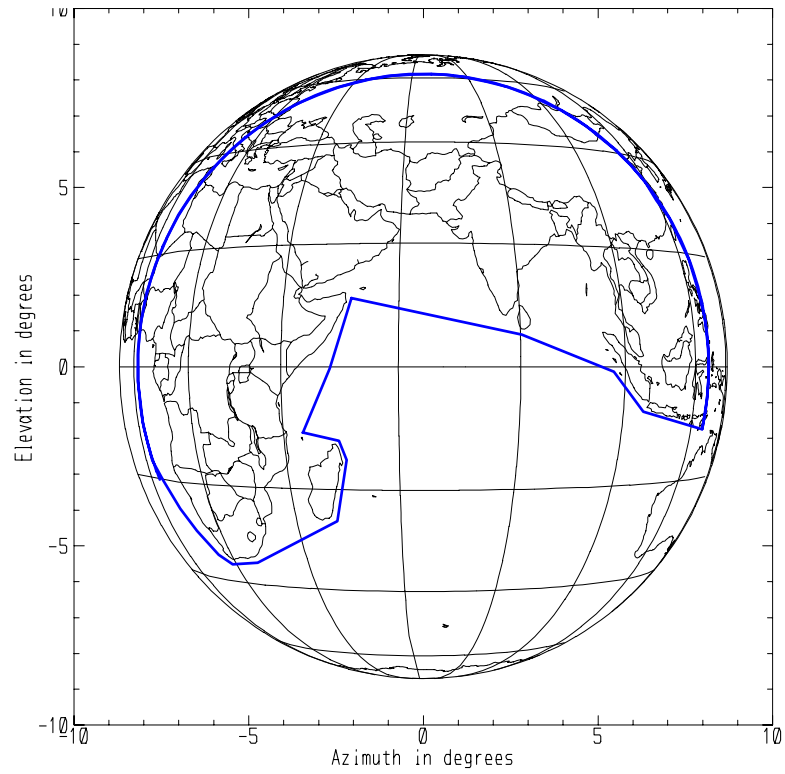


# ■ BGAN Coverage

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## ■ In Summary

- Thrane & Thrane has a solid financial track-record with growth and positive profit every year since 1982
- Product development and the ability to efficiently reuse technology across market segments is a core competence
- Thrane & Thrane's already strong market position is expected to be further reinforced in the coming years, particularly driven by:
  - The Fleet77, Fleet55 and Fleet33 maritime high-speed terminals
  - The mini-C tracking terminal
  - The aeronautical high-speed systems
  - The RAN for Inmarsat's future BGAN system and
  - User terminals for the BGAN system
- These products are the foundation for Thrane & Thrane's future growth



