TECHNICAL: SPACEFLIGH T

Matra to build Locstar satellites
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ocstar, the European space
telecommunications consor-
tium, has signed a FFrl billion
($151 million) contract with
Matra Espace for the manu-
facture of two satellites for radio
location and radio commu-
nication with mobile trains,
trucks and buses. Both satellites
will be launched by an Ariane 4
Spelda rocket in the spring of
1992, for service soon after, with
one million subscribers from the
UK to Turkey and from Norway
to Italy. In due course Locstar
expects to extend its coverage
and network to the Middle East
and Africa.
Matra clinched the deal in the
face of tough competition,
mainly from Alcatel, putting into
operation the first space-based
international interactive mess-
aging and radio location service
with mobile units. Matra based

its technical offer on Eurostar,
the most modern platform avail-
able internationally which has
already been selected for the
Telecom-2 and Inmarsat-2
programmes.
Eurostar makes it possible to
produce third-generation satel-
lites with total weights of
1,350kg each on take-off, includ-
ing payload and with life spans of
10 to 15 years, depending on the
mission, Matra chairman and
chief executive Jean-Luc
Lagardere tells Flight.
For Locstar, Matra Espace
designed a system allowing the
highest possible performances in
terms of transmission and recep-
tion. The satellites will have
a very powerful transmitter
and ultra-sensitive receiver, and
an extra-high-gain antenna for
S- and L-band communications.
S-band signals will be amplified

by travelling wave tubes of nearly
100W power, providing, with the
antenna gain, a minimum of
51dBW useable on the. ground—
enough to deliver audible signals
while remaining compatible with
the flux limitations imposed by
radio communication regu-
lations, says Claude Gourny,
Matra Espace division chief.
The satellite's L-band
receivers will be highly sensitive,
using low-noise FET transistors.
The return transponder which
links with the dispatch centre
will be manufactured with high-
power, solid-state amplifiers,
with technology developed for
the next generation of satellites
from the Intelsat organisation.
Locstar chairman Frederic
dAllest tells Flight that messages
exchanged between the trans-
mitting and receiving centres
should allow for 300,000

"transactions" per hour, serving
the million subscribers. At
present Locstar has 27 share-
holders in nine European coun-
tries and the USA, including
Geostar. "We expect to increase
our capital (initially set at FFr100
million), work out a financial
package of FFr2 billion, and
welcome new shareholders
before the end of the year,"
dAllest says.
Matra Espace is the industrial
prime contractor for Locstar.
British Aerospace, Matra's part-
ner in Satcome International for
Eurostar, is among the manu-
facturers, which include GEC-
Marconi Space Systems for
payload repeaters (bands used
for communications) and Selenia
Spazio for L- and S-band anten-
nas. Aerospatiale, CASA,
Dornier, and Fokker are also
associated with Locstar. •

Galileo arrives

at Canaveral

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oth components of the
Galileo mission to Jupiter
have arrived at the Kennedy
Space Center for their launch on
Space Shuttle Atlantis on Octo-
ber 12. The Galileo Jupiter
orbiter was delivered from the
NASA Jet Propulsion Laboratory,
and the Galileo atmospheric
probe from Hughes.
The combined spacecraft is in
the Kennedy Space Center's
Spacecraft Assembly and Encap-
sulation Facility 2, and will be
moved to the Vertical Processing
Facility for mating with its IUS
upper stage in late July. The
stacked Galileo-IUS combination
will be mated with the Atlantis
shuttle orbite'r on August 28.
The STS 34 Atlantis mission,
commanded by Donald Wil-
liams, with a crew of four, will
deploy Galileo for its six-year
cruise to Jupiter, flying, once
around Venus and twice around
the Earth to pick up gravitational
energy to divert it on a path
towards its final encounter.
During its mission Galileo will
explore the asteroids Gaspra and
Ida. •

NASP PROPULSION SYSTEM "EXCEEDS GOAL

Pratt & Whitney claims that its propulsion system for the proposed US National. Aerospaceplane (NASP) has exceeded performance goals in initial tests. Data from testing verifies that the design "meets NASP requirements," according to P&W space propulsion vice-president Joseph Zimonis. Low-speed-engine tests take place at Wyle Laboratories' hydrogen technology centre, which provides high-pressure liquid and gaseous hydrogen to evaluate engine and airframe components.

SFENA success blow for Ferranti

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he successful operation of
two SFENA laser gyro refer-
ence system units on the latest
Ariane 4 launch V31 on June 6
—the first launch with two laser
gyro inertial systems—may
adversely affect the bid by
Ferranti to become prime
contractor for the ring laser gyro
for the Ariane 5 vehicle.-

Ferranti has supplied guidance
systems on all previous Ariane
launches. These were gtmballed
inertial measuring systems.
Ferranti has a contract to develop
the ring laser gyro technology in
preparation for Ariane 5, but the
UK's lack of financial support for
the new booster may be an addi-
tional adverse factor. •

BSB/Atlantic

satellite joint
venture possible
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he IBA's decision to award
British Satellite Broadcasting
(BSB) two further DBS channels
has made a joint venture between
the company and Atlantic
Satellite, the Government-
approved Irish DBS company, a
possibility.
With two operational satellites
in orbit by August next year, BSB
could have ten channels avail-
able. Hughes Space and Commu-
nications Division, which is
supplying the HS 376 satellites
for BSB, is also a shareholder in
Atlantic Satellite.

Hughes vice-president Steven
Dorfman says that such a
venture is "technically feasible,
and is a clear option to be
considered". He says, "It is
clearly useful to think about an
English-speaking ten-channel
capability at 31°E for BSB and
Atlantic. Clearly, it would need
approval from respective govern-
ments."
BSB's first satellite is due to be
launched on August 10. •

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