1991 but likely to be delayed, is
led by Lockheed Aeronautical
Systems Company (LASC) al-
though it was Rich's Lockheed
Advanced Development Com-
pany (LADC—the Skunk
Works) that designed and built
the two prototypes. "When we
win, ATF will be built by LASC
in Georgia," says Rich.
Under a plan to "downsize"
Lockheed's aircraft business,
LASC will be based at Marietta,
Georgia, and LADC at Palmdale,
California. Aeronautical Sys-
tems Group's Burbank, Califor-
nia, site will be closed down
and the land cleaned up and
sold, netting Lockheed up to
$250 million.
The slimming down of Aero-
nautical Systems Group and the
creation of two "boutique" air-
craft companies will limit the
impact of further defence cuts,
says Lockheed chairman Tellep.
Aircraft now account for just
22% of company sales, with
missiles and space accounting
for over 50% and services such
as commercial aircraft mainte-
nance and airport development
for around 16%.
Following heavy losses on the
C-17 and P-7 Lockheed, in
common with Northrop, has
refused to bid for fixed-price
development contracts. The De-
partmen t of Defense has
stopped issuing such contracts,
however, and ATF full-scale de-
velopment will be performed
under a "cost-plus award fee"
contract, says Tellep.
The Lockheed chairman an-
ticipates no further major set-
backs, having written off all
losses in 1989 — including
$300 million on the cancelled
P-7 programme, a large part of
which could be recovered if
Lockheed succeeds in having
the Navy's termination for de-
fault changed to a termination
for convenience.
If Lockheed wins, the F-22
would become the major pro-
gramme at LASC which will
continue to produce the C-130
into the next century, Tellep
believes, and which will pre-
serve the P-3 tooling in case a
new requirement emerges for
the patrol aircraft.
The Lockheed chairman is
confident that ATF will con-
tinue but accepts that the pace
of the fighter programme is
open to debate.

Selection of the winning team
is scheduled for May 1991 with
full-scale development to start
in Fiscal Year 1992—in October
1991 at the earliest but likely to
be later.
Rich is also bullish about the
programme: "ATF will enter
service in 2-002, 30 years after
the F-15 first flew," he points
out, arguing that the US Air
Force's present air-superiority
fighter will be well overdue for
replacement by that time.
Rich believes that the Skunk
Works experience in building
aircraft slowly but efficiently
could prove vital in a scaled-
down, stretched-out ATF pro-
gramme. Eight F-117As a year
were built, yet the 59 aircraft
were delivered on time and
under budget, he notes.
The Skunk Works chief is
concerned that budget cutting
will lead -to technology being
developed then left on the shelf.
"You must keep pushing tech-
nology or its become obsolete
on the shelf ...you've got to use
it to learn how to use it."
He cites the Lockheed F-117A
stealth fighter as an example.
The aircraft was developed to
prove that emerging stealth
technology could be used opera-
- tionally and Rich says results
from operational use of the F-
117 have been critical to devel-
opment of the B-2 stealth
bomber as well as to Lockheed's
own ATF.

Design for stealth is reflected in the YF-22's diamond-section nose

As an example, Rich reveals
that problems with the F-117's
butterfly tail led Lockheed to
develop the first carbonfibre-
reinforced thermoplastic pri-
mary structure to be flight-
tested, put in production and be
operationally deployed.
Having successfully combined
stealth with manoeuvrability,
Rich sees his next target as
being to reduce costs—possibly
by using throwaway parts in
aircraft built for war use only,
so cutting out the costly logistic
support chain. Other likely
areas for future interest for the

Skunk Works include advanced
propulsion systems and short
take-off/vertical landin g
(STOVL) aircraft, he says.
If an enemy cannot counter
ATF in the air, Rich argues,
then it will go for the aircraft's
- vulnerable land bases: "A super-
sonic, stealthy ASTOVL aircraft
would have somewhere to come
home to," he says.
That is in the future, how-
ever. Today's Lockheed concern
is in winning a programme that
will secure the future of its
restructured, scaled-down mili-
tary aircraft business. D

Design for manoeuvrability is evident in the YF-22's large wing and tail surfaces, leading-edge strakes and devic

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