100% of TPG stock purchased by Boeing
Year ended with excellent financial results
TAAM Plus version 1.0 released on time
New TAAM customers joining WWTUG
Intensive simulation project work
R&D project with MITRE CAASD started
Nowcasting proof-of-concept prototype built
TAAM evaluation by Eurocontrol in progress

…our best year ever.
Boeing purchase

- A sign of high value of our technology
- TPG will continue as an independent entity
- No changes to management or operation
- Stronger growth backed by a giant parent company with a strategic focus
- Long-term stability and growth
- New exciting projects
TAAM Plus release

- The result of a year’s work
- Open Systems platform
- Client/server architecture
- Runs on SUN’s top-of-the-range workstations – and now also on Intel machines under Linux
- Next, a 2-year development program approved by Worldwide TAAM User Group
  - Major enhancements to functionality
  - A new level of flexibility for TAAM Rulebase
  - Gradual migration to Object-Oriented Architecture
  - Growing “aftermarket” of pre- and post-processors
  - A stepping stone for the next wave of TPG tools
New customers

◆ New TAAM license sales in 1999
  – FAA and MITRE bought 4 licenses; FAA is now the biggest TAAM user, with a combined total of 6 licenses
  – Vienna International Airport – 1st airport licensee
  – NavCanada – 2 licenses
  – Brazil – first license in Latin America
  – Finnish CAA – long-term lease
  – ENRI Japan – 2nd license
  – Swisscontrol – 2nd license
  ✓ Virginia Tech; GMU; Aachen Tech.Univ. (academic licenses)
  ✓ We expect three major airlines, more universities and CAAs to come on board in 2000
  ✓ We also expect more additional licenses ordered by existing users
TAAM scope

- TAAM is an airport *and* airspace model supporting gate-to-gate fast-time simulation
- The two “worlds” are tightly interconnected – hence the need for a complete model
- A single TAAM software version supports airport, airline, CAA, aviation R&D users on five continents
- Scalable from a small airport to an entire NAS
- Flexibility achieved through a sophisticated rulebase and the use of options and parameters
- Can be, and is being, used as a “carrier” for other applications
TPG Simulation project work

- Three projects for United (SFO, ORD)
- MSP runway construction study for Northwest Airlines
- Louisville inbound flow improvements for UPS
- StLouis airport study for TWA
- Johannesburg Master Plan alternatives analysis for ATNS/ACSA, South Africa
- DFW impact of RJs study for American Airlines
- Sydney airport expansion study
- Adelaide International Airport, ground capacity study
- Helsinki Vantaa 3rd runway study commencing

This has enriched our TAAM developers’ perspective from a different angle: the customer’s
TAAM has proved itself as a rapid-development tool for airport and TMA simulations.

In our studies in 1999:

- Baseline development from scratch averaged at 4-5 weeks
- Baseline calibration metrics – the 90/10 principle
- Then, 1-3 weeks per major study alternative
- Simulation speed: a complete day of operation for largest US airport takes 25 min to run
- Total study duration was typically 9-10 weeks
- The new VR Viewer and TAAM Movie tools will allow better presentations “in the boardroom”
TPG/MITRE R&D

- A 3-year R&D joint TPG-MITRE project
- Objective: to increase TAAM computational performance by at least an order of magnitude
- Joint analysis and optimization of TAAM libraries and algorithms
- Research into applications of parallel processing so TAAM can run on multi-processor machines
- A North-Eastern US simulation (34,000 flights in a 24-hr period, 40 airports, 6 Centers, 315 sectors):
  - Currently takes TAAM 8 hours to complete on an Ultra10
  - The aim is to reduce this time to about 30-40 minutes
Nowcasting

ASDI / ETMS
Traffic

Real-time
Weather

Airport, airspace
layouts, usage,
procedures

AADS

Nowcast

TAAM

Live
display

Archive

Operational
decision
support
Better operational decision support

Will the traffic forecast 100% accurate? This wouldn’t be realistic to expect, but we can have:

- Reasonably realistic simulation in TAAM from a real-time starting point;
- Continuous tactical “probe”;
- Better - and fast - insight into the nearest future (2 hrs);
- Better judgement on how the traffic and weather situation is likely to evolve;
- Improved decision making in mitigating impact of weather and other disruptions;
- Better traffic flow on a routine, daily basis.
A 6-month TAAM evaluation process

Two teams: Bretigny (airspace/TMA) and Brussels (airport/TMA)

A joint EC/TPG Technical Evaluation Team

Work is progressing reasonably well

We hope that TAAM will prove to be a useful tool for Eurocontrol’s toolkit
Where do we go from here?

- TPG is continuing its massive investment in TAAM software development
- A more user-friendly, flexible, faster, more open TAAM, with advanced visualization and data extraction capabilities, taking advantage of client/server environment
- TAAM as a (near-)real-time decision support tool
- We will continue to maintain a single software version but will diversify TAAM use and pricing for different markets
- This will make TAAM more affordable for a wider circle of users