



DASSAULT : Manufacturer's experience on LPV-200

Speaker : Alain BOUCHER



HIGHER TOGETHER™



Dassault Aviation The Company



- French civil & military aircraft manufacturer – privately owned
- Over 8,000 aircraft delivered worldwide since 1945 / 28 million hours of flight time
- Customers in more than 80 countries
- 12,100 employees, more than 9,000 based in France



Dassault Aviation

The Falcon business jets product line



FALCON 2000S
3,350 NM – Twin-jet



FALCON 2000LXS
4,000 NM - Twin-jet



FALCON 900LX
4,750 NM - Trijet



FALCON 5X
5,200 NM - Twin-jet



FALCON 7X
5,950 NM - Trijet



FALCON 8X
6,450 NM - Trijet

Business aviation

Some specific operational needs

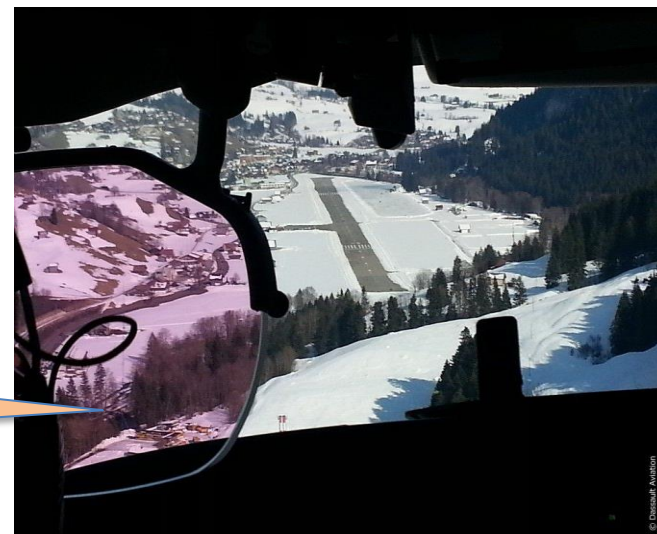


- Worldwide operations, day / night, in all weather conditions
- Quick response time to customer expectations, no delays, no diversions
- Provide access to all kind of airports, from big Hubs to small remote airfields with very limited ground infrastructures

Gstaad - Switzerland

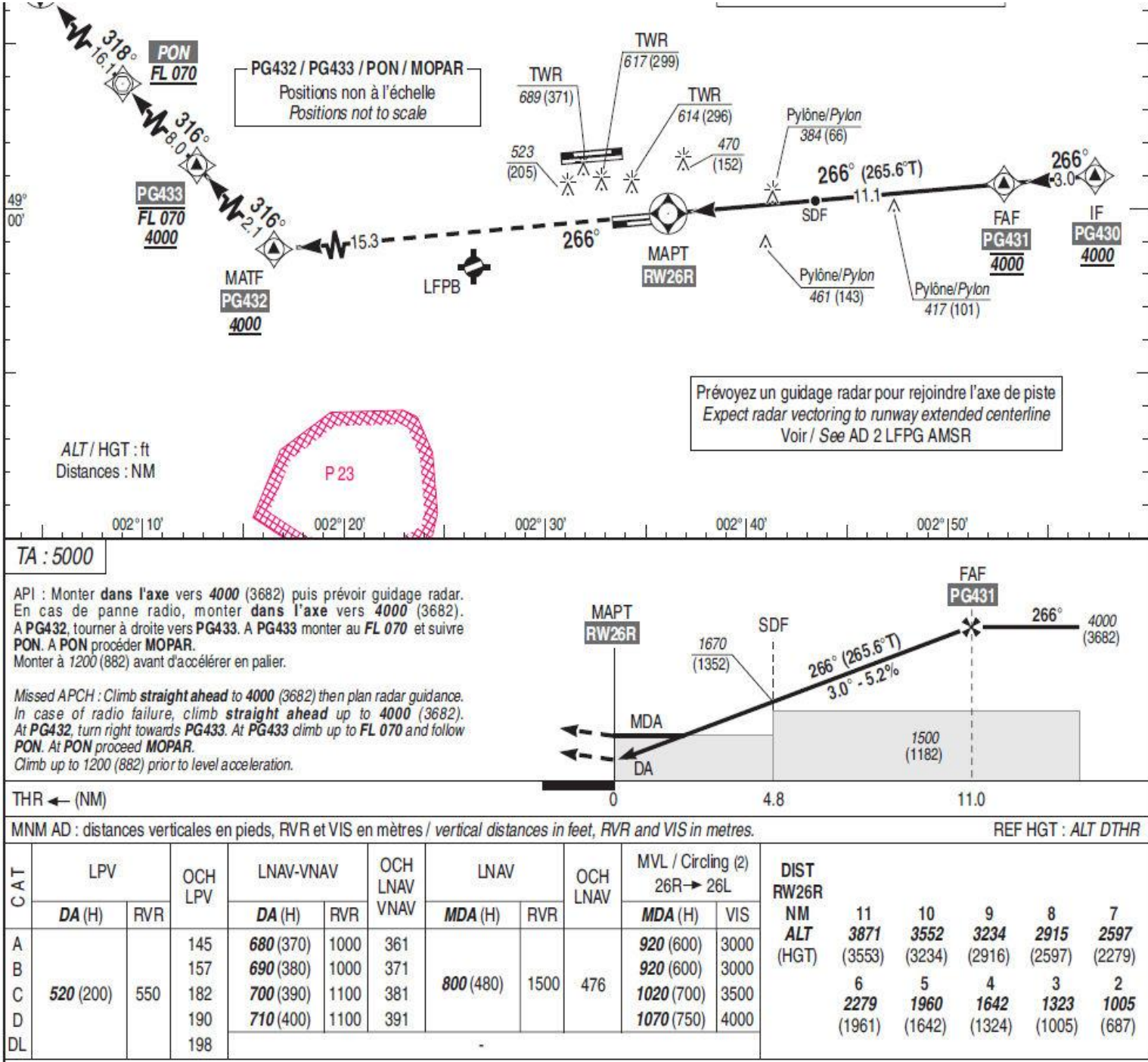
→ Business jets manufacturers are looking for high performance onboard solutions, to maximize flexibility of operations

Satellite Navigation is clearly a key piece to achieve that goal



Business LPV

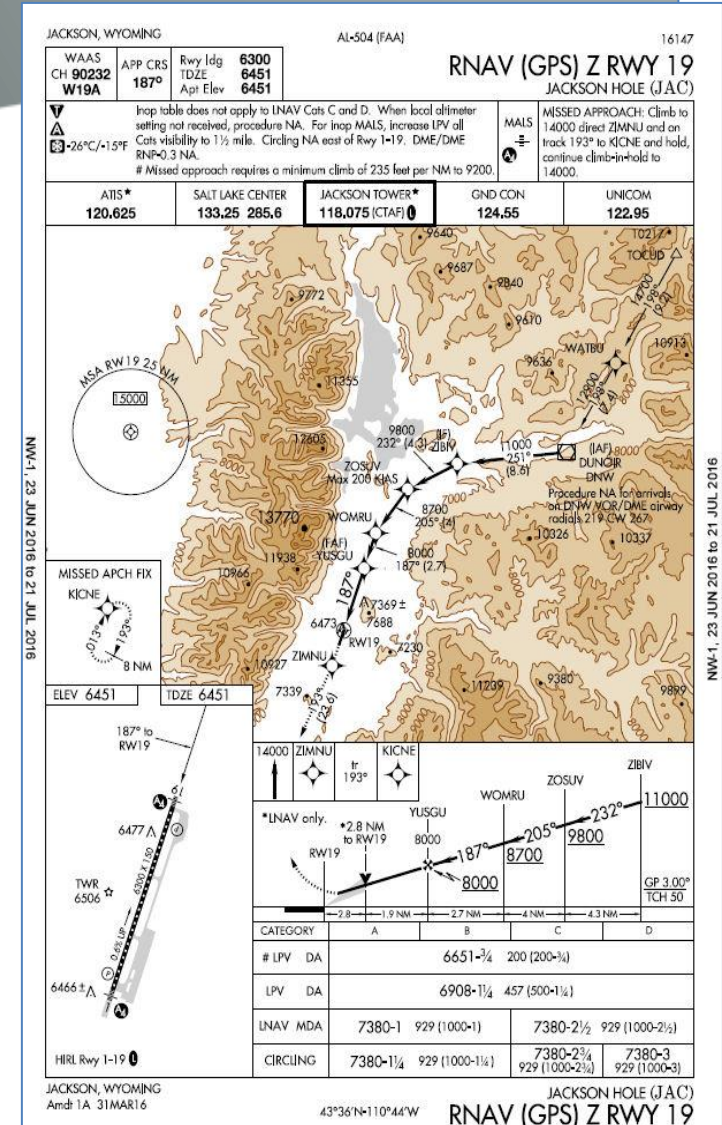
- LPV are
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- System



Business aviation LPV benefits

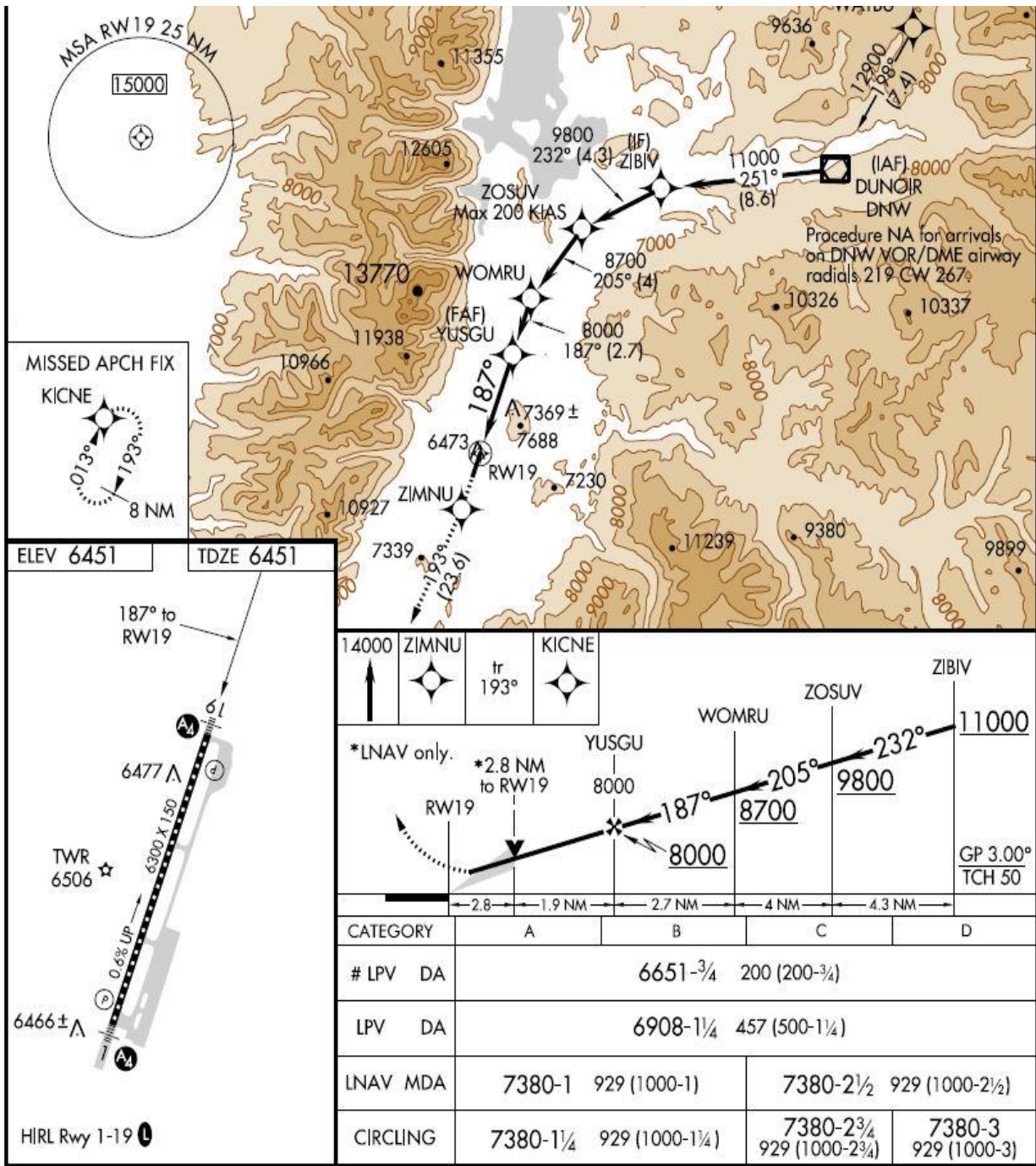


- LPV does not require ground infrastructures – fully satellite based
- Can be developed on small airports not able to equip with Cat1 ILS - for economical or technical reasons
- Even in pretty challenging environments



Business aviation LPV benefits

- LPV does not require infrastructures – fuel based
- Can be developed and implemented without the need to be able to equip with Category II or III
- Even in pretty challenging terrain

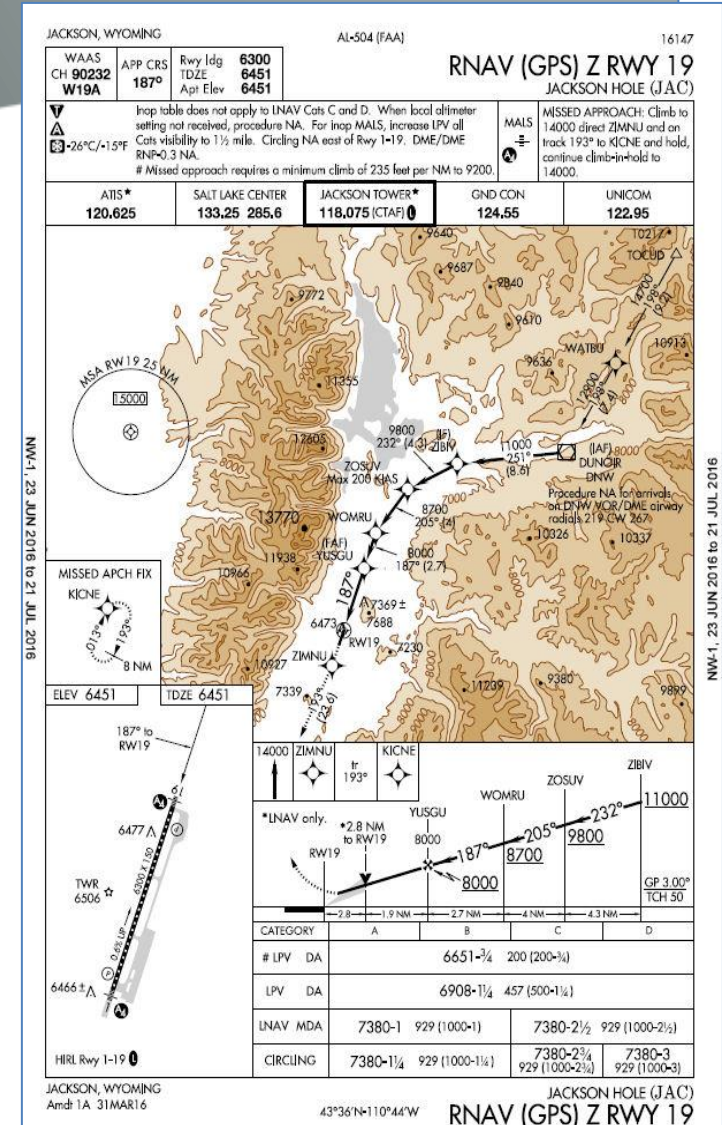
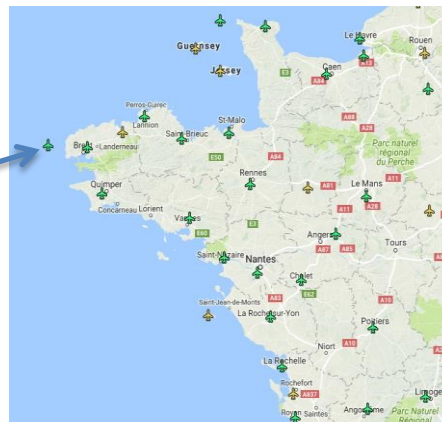


Business aviation LPV benefits

- LPV does not require ground infrastructures – fully satellite based
- Can be developed on small airports not able to equip with Cat1 ILS - for economical or technical reasons
- Even in pretty challenging environments

→ In bad weather conditions, significant accessibility and safety improvement for many airports

i.e. : Ouessant



Business aviation LPV benefits

- LPV does not require ground infrastructures – fully satellite based
 - Can also be used as a backup to some existing ILS installations (Paris CDG)
- Or even replace ILS

French airports where ILS is being decommissioned, replaced by LPV



<u>Airport</u>
Dinard
Le Havre
Vannes
La roche sur Yon
Auxerre
Dijon
Montluçon
Périgueux (NOTAM)
Valenciennes
Albi
Bourges
Bézier
Carcassonne
Colmar
Le Puy
Melun
Mende
Morlaix
Nancy Essey
Nîmes
St Brieux
Valence
Valenciennes
Vichy

Dassault Falcon Aircraft LPV implementation in the cockpit



- All Dassault in-production aircraft are LPV-200 capable since 2011

Dassault Falcon Aircraft First European LPV-200 with EGNOS



- 2016, May 3rd – Roissy CDG airport



“The accuracy and stability of LPV guidance is really amazing, much better than with ILS”

Dassault test pilot Jean-Louis Dumas

Conclusion



- EGNOS, allowing now LPV-200, is a great step forward for many aviation users in Europe
- It can be anticipated that, as in the US, the number of published LPV procedures will quickly increase in Europe
 - 3710 in the US, serving 1806 airports – 1055 are non-ILS airports Data FAA : 2016 August 18
- Introduction of Galileo and further improvements of EGNOS are the next steps for Satellite Navigation : much more safety and operational benefits to expect !



Thank you !

