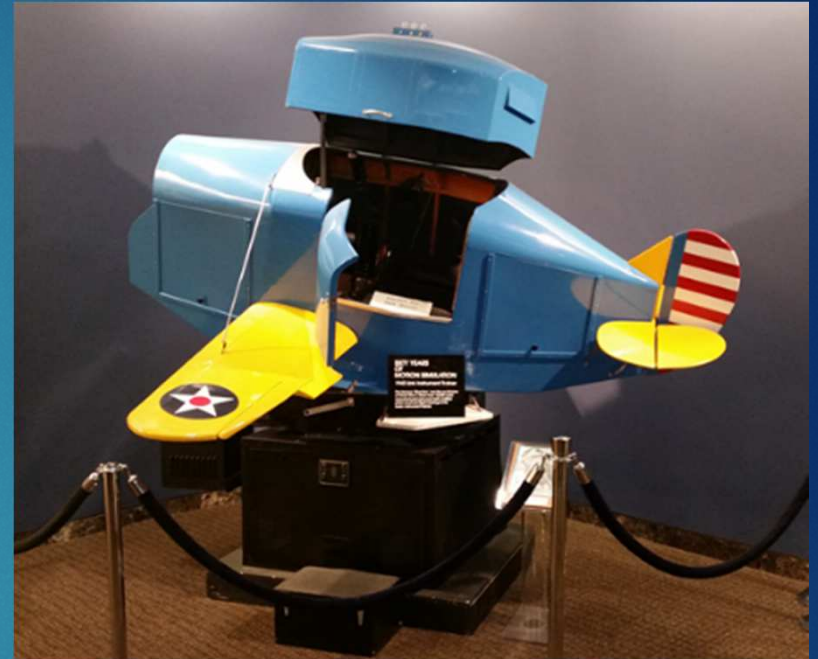


Helicopter Simulation Review

Which simulation for which training ?



HELISIM

Framework

- ▶ Introducing to helicopter simulation
- ▶ FSTD regulation reminder
- ▶ 2014 simulator industry offer
- ▶ Operators' needs
- ▶ Training centers proposals
- ▶ Conclusion

Introducing helicopter simulation



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Helicopter simulation

Why ?

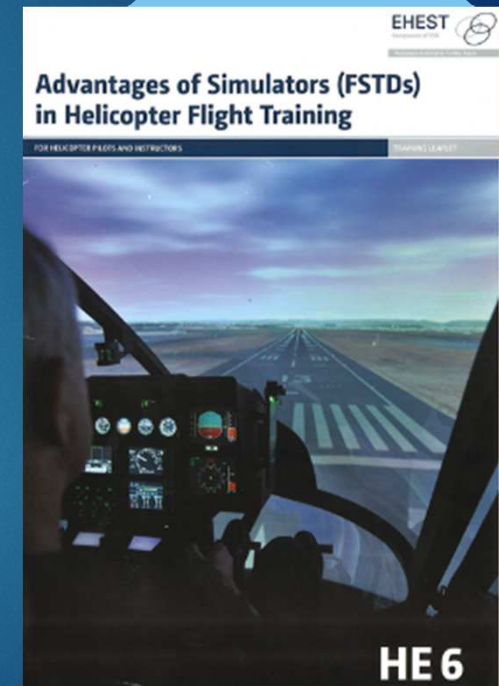
- At the beginning
 - ▶ Cost-effectiveness
 - ▶ Better training
- Then for
 - ▶ Training safety
 - ▶ Ecology
- Now for
 - ▶ The only way for realistic training
 - ▶ Efficiency

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FSTD regulation reminder

FNPT : generic / visual / no motion neither vibration

- ▶ Ab-initio
- ▶ Procedures
- ▶ Instrument
- ▶ Navigation
- ▶ Safety
- ▶ MCC



HELISIM

Slide 5

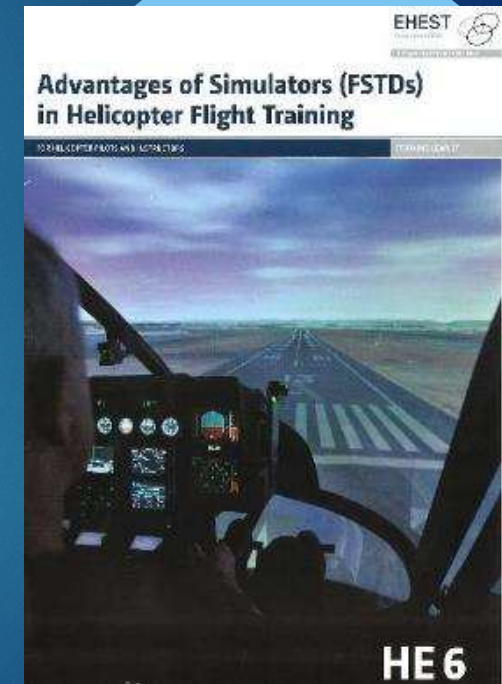
JDT1

Jean-Charles De Troy, 20/11/2014

FSTD regulation reminder

FTD : type specific / visual / no motion sometime vibration

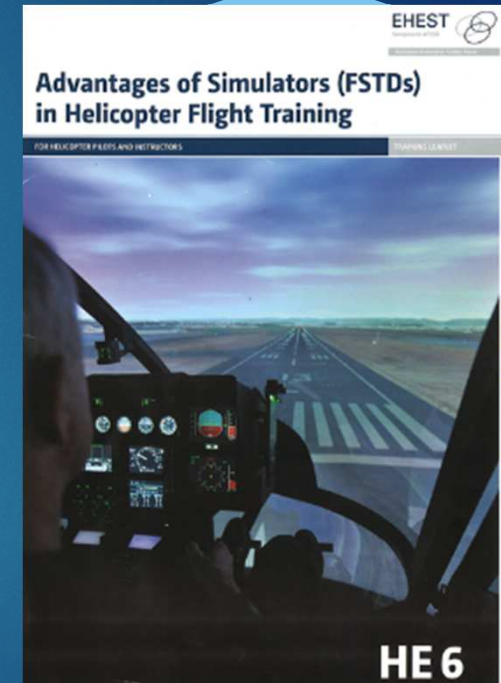
- ▶ Type rating
- ▶ Procedures
- ▶ Recurrent
- ▶ Ab-initio
- ▶ Safety
- ▶ MCC



FSTD regulation reminder

FFS : type specific / visual / motion

- Type rating
- Recurrent
 - Navigation
 - Safety
 - MCC



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FSTD regulation reminder

OTD :

▶ other training



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2014 simulator industry offer

Generalities

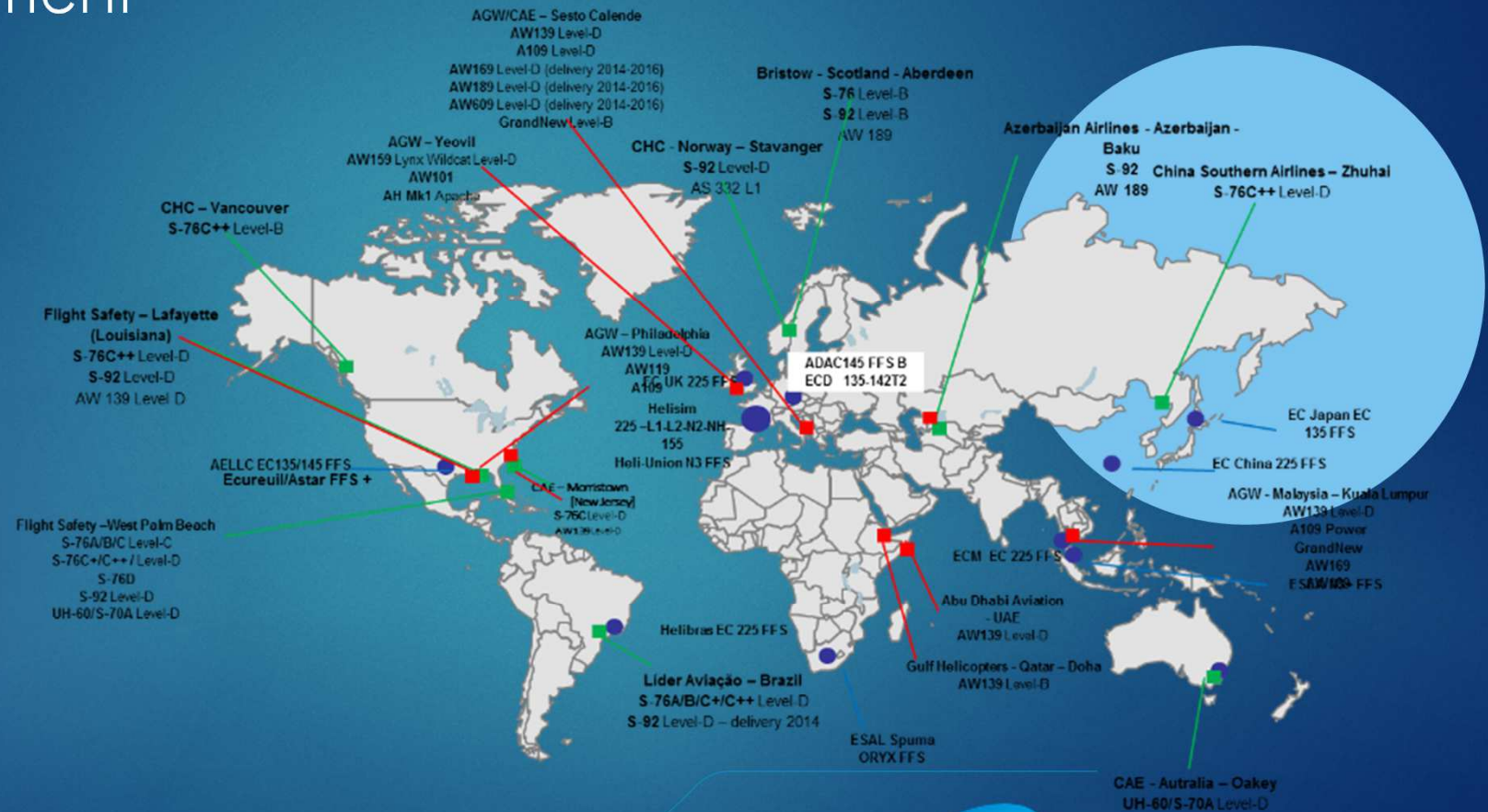
- ▶ A continuous improvement
- ▶ Regulations (credits) lead
- ▶ Ready for zero flight time ?
- ▶ More and more efficient



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2014 simulator industry offer

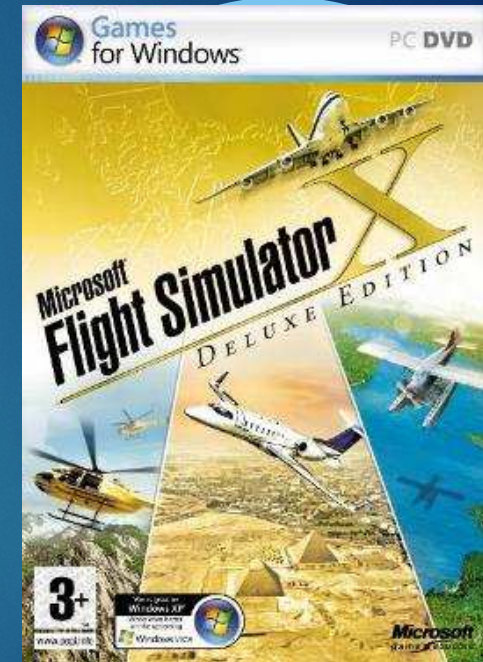
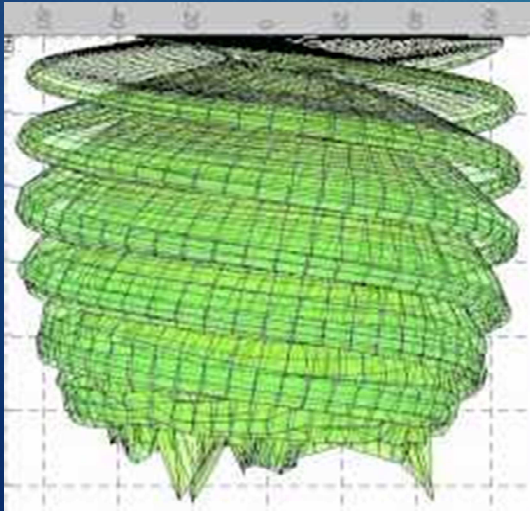
FFS deployment



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2014 simulator industry offer

- ▶ Lines change
- ▶ Retro engineering
- ▶ OEM data package
- ▶ Avionics software
- ▶ Start-up
- ▶ Serious games
- ▶ Virtual reality



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Operators' needs

Initial training / Instrument

- ▶ Low cost
- ▶ Modern avionics
- ▶ GNSS capabilities
- ▶ Availability
- ▶ Proximity



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Operators' needs

Type rating

- ▶ Better height feeling
- ▶ Avionics and AFCS fidelity
- ▶ Zero Flight Time
- ▶ Close optionals
- ▶ Cost
- ▶ Availability



Operators' needs

Recurrent training / MOST

- ▶ Realism
- ▶ Fidelity
- ▶ Confidence

But also

- ▶ Real aircraft optionals
- ▶ Availability
- ▶ Proximity



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Training centers' proposals

- ▶ Flight safety first
- ▶ Cost
- ▶ Mixing simulation in training programs



Conclusion

- ▶ Use the mean dedicated to your training whatever it is but be sure it is appropriate.
- ▶ Zero flight time is the next step for helicopters
- ▶ The paradox is you simulate in real rotorcraft and do it real in simulator