

# Seat Certification by Analysis

## SACO Experience

Presented to:

By: Bob Kaufman, Senior Engineer, CS

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Federal Aviation  
Administration



# Seat Certification by Analysis

- **Have we had any applicants interested in this?**
- **We haven't had any applicants approach us with a proposal to do this since the AC was released. However, we have only one very new TSO seat supplier (Jamco) in our area and they have not proposed anything along these lines. After they expand their capabilities it's a possibility.**
- **Since nearly all the testing is done under the TSO I'm not aware that Boeing is interested in this.**

# Seat Certification by Analysis

- **If an applicant proposed a project using this, what would you do?**
- **I would get help from our modeling experts in the SACO structures branch and Transport Standards Staff. I would also probably contact our CSTA Joseph. 😊**



# Seat Certification by Analysis

- **Are you aware of any applicants using this?**
- **The only time I have seen or heard of more sophisticated analysis methods being used it was for design only or to predict the critical load cases in advance of certification testing.**



# Seat Certification by Analysis

**Are you aware of the AC and ARP?**

- **I'm familiar with the AC but not the ARP.**

**What could be improved in AC?**

- **The AC is written at a pretty high level it could use more detail on validation requirements and more detailed examples.**

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- **What training would you need?**
- **I'm not sure what would be needed. I have some FEM experience and took the 2006 LS Dyna intro class that Steve Soltis arranged a few years back. That helped but I don't think this alone would allow the average engineer to evaluate the validation of a complex dynamic model. You need experience to evaluate complex dynamic models.**
- **Steve also offered a Madymo class a few times to get us familiar with ATD modeling.**
- **I almost think we need a special team of highly experienced dynamic modeling folks that would evaluate and approve the applicant models. The ACO engineers could be trained to evaluate the results for compliance so that they could review the data after the experts approve the model validation.**



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**Also policy that uses analysis not used much on projects that we have seen**

- **We have seen maybe one use of seat cushion replacement policy.**

