PHOTOGRAMMETRY ANALYSIS

Where Real-Time Meets Precision
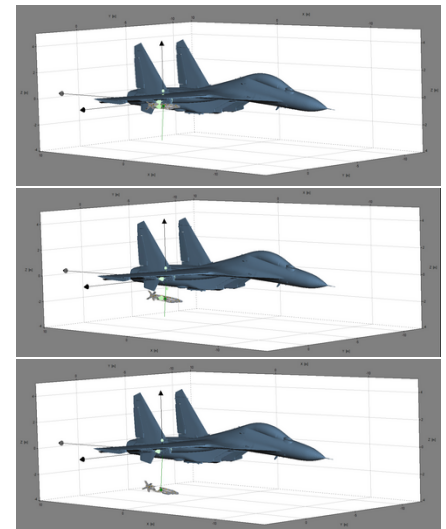
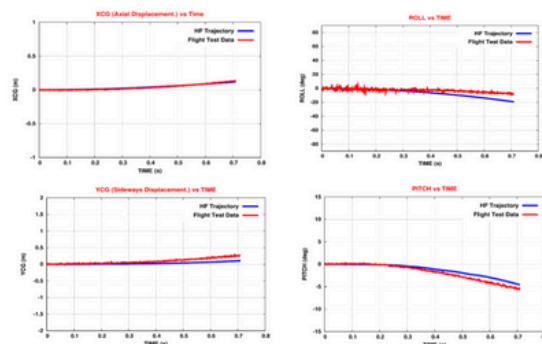Blue Hat Solutions

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About

Photogrammetry analysis plays a critical role in **flight testing, providing essential insights into weapon release behaviour.** In this process, real-time footage of weapon release is captured using an airworthy, high-definition camera, ensuring high-quality data. This footage is then processed using **advanced 6 Degrees of Freedom (DOF) motion analysis software**, which meticulously tracks and analyses the movement dynamics during the release sequence.

Concurrently, **Computational Fluid Dynamics (CFD) simulations** are conducted under identical flight conditions to replicate the actual environment during the test. The results of the CFD simulations are then compared with the 6 DOF motion analysis to verify the accuracy of the CFD model.

CFD vs. Flight Test Data match

By validating the CFD model against real-world data, the model's precision is enhanced, allowing it to be used for further simulations. This **validated CFD model** can then be employed to analyse a wide range of flight conditions in which **a store is intended to be released**, thereby reducing the need for additional flight trials while maintaining high levels of confidence in the results. This integrated approach streamlines the testing process and enables more efficient analysis of weapon release behaviour across various scenarios.