

緯創自主開發 Plug-In 各項功能與其他公司比較

Wistron ABAQUS Self-Develop Plug-In Capability and Function Comparison with Others

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摘要

近年來 CAE 技術局限於電腦設備，很難進一步縮短運算時間，仍需耗費許多開發成本，且現今市場競爭激烈，如何最快找到 solution，已成產品開發的重要課題。因此，本文以縮短繁瑣的操作設定為目標，利用程式語言 Python 編寫 Plug-In 運用於 Abaqus 開發 3C 產品的流程自動化，縮短使用者的操作時間，可有效的降低開發成本。同時自動化程式也能降低使用者操作上的難度。大幅度降低學習的難易度，能使新人較容易上手，減少人為的疏失和錯誤，並可使每次分析達到一致性的品質。

本文也將自行開發的 Plug-In 與其他公司進行比較，探討其效率和優缺點等，並共同學習改善，更進一步提高 CAE 的模擬效率。

關鍵字：流程自動化、Plug-In、Abaqus

ABSTRACT

In these few years, CAE technology is restricted by computer equipment. It is difficult to reduce the calculation time, causing the cost of time still quite expensive in CAE. Nowadays, due to competitive market, to quickly find solution has become an important issue in product development. Therefore, we are looking forward to simplify the process by using Python and Abaqus plugin. Developing the process automation of 3C product simulation can reduce time of user handling manually in the CAE process can help reduce cost of development effectively. At the same time, the process automation can cut off some difficulties for the newcomer, making it easier for them to learn, and decreasing human mistakes and increase the quality of control in every simulation.

Self-developed Plug-In compares with others company in this article. Efficiency pros and cons of individual plugin are discussed for further study and improvement of efficiency for the CAE industry.

Keywords: Process Automation, Plug-In, Abaqus

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Item	Comparison	
	Other Plug-In	Wistron Plug-In
Drop	It Only can automatic set up drop of face. If would like to drop edge and corner, needing manually handling for angle calculation.	Automatic set up gravity, height, mass scaling, and data output...etc. Select drop directions include face, edge and corner before the plugin rotate with respect to mass center and generate drop models.
Shock	N/A	Automatic set up shock profile, gravity, data output and directions. Automatic calculate strain gauge location and rotation angle of chipset. And then output data into a log file for later use in plug-in "CritReviewer".