

# **INTRODUCTION: “Outside the Lines” Automated Equipment Repair Event Platform designed for Force Structure Cases**

08/02/2015

[0 Comments](#)

In this report, force structure event-centered risk equipment repair platform for modifications powered by an automated framework is presented. The purpose of this platform is to properly train dispatchers. This simulation will progress as repair events impacting supplier capacity warrant.

Upon receiving notice of equipment repair events reported at multiple installations, dispatchers integrate assessments of supplier capacity predictions, adjust their views on installation requirements & act according to new quote schedules.

Equipment repair action at installations taken by dispatchers have been found to collectively shape force structure adjustment dynamics. We will present the underlying components that are employed for this exercise & discuss the practical significance of such a platform.

Supplier capacity risk assessment has changed from direct exchange services without quote consideration to advanced contracting arrangements according to schedule with dispatchers guaranteeing quotes.

Since the scope of equipment deployment is so wide & future platforms so intricate in design, dispatcher behaviour design has become much more important but also extremely challenging. What makes equipment repair so critical is real-world operations are behind all the quotes in any form.

Even though the volume in incoming quotes has overtaken capacity of supplier services, real-world quotes are still critical since the supply & demand balance of equipment & subsequent quotes are still the primary determinants behind force structure adjustment cases.

Key to understanding equipment infrastructure relation to force structure adjustments is the fact that, no matter how complex quotes are, they all need to closely reference services provided by suppliers. Quotes are influenced significantly by all the elements that link together supplier capacity for each side of installation demand signals.

For example, some of the many factors present in function of repair site disruption or schedule delay of equipment deployment will impact quotes dispatched to repair simulations. Other factors, like work order routing patterns, exert significant impacts force structure adjustment cases.

Therefore, to ensure successful dispatcher assessments of supplier risk in a particular force structure adjustment case, dispatchers need to be very familiar with real-world supplier capacity for different types of equipment. These requirements are the primary considerations in deciding what dispatcher training platforms will be subject to automation.

On the other hand, complex requirements probably also explain why fully automated quote scheduling not taken over dispatcher platforms yet. On some level, this is what motivates our design of equipment repair simulations.

We want to create work order space realistic enough so dispatchers can be effectively trained & document dispatcher behaviours in the face of complex supplier risk factors, with the ultimate goal of making automated platforms for equipment repair function just as dispatchers would in designing force structure adjustment cases.

Despite the fact that there is an incredible amount of literature in defence sectors that could, in principle, be applied to quote modeling for force structure adjustment cases, in the final analysis, we find them unsuitable for our purposes, since there is a fundamental lack of links between real-world equipment repair events & quote schedule dynamics.

To address this need, we have designed force structure event-centered risk assessment platforms for repair simulations at multiple installation in which events related to quote automation are detailed according to a series of user-defined events. By allowing events to be defined by dispatcher behaviour, we also grant ourselves the ability of creating force structure adjustment case details that are often overlooked but extremely important to mission success.

Stated conceptually, our principle goal is create platforms with constructive quote schedules to recruit, train & introduce dispatchers into equipment repair systems. When Installation events are announced for repair simulations, dispatchers will assess risk supplier capacity relations to force structure adjustment cases according to assigned team function. Subsequently, repair events & information will result in equipment deployment according to defined quote schedules.

Force structure dynamics at installations will be shaped by joint dispatcher actions for simulating equipment repair. As demonstrated in initial simulations we have designed, we have shown accurate quote schedules can be generated with fairly simple dispatcher training strategies.