

Reducing Scrap and Rework

Andy Nolan (Rolls-Royce) - Andy.Nolan@rolls-royce.com

Andrew Pickard (Rolls-Royce) - Andrew.C.Pickard@rolls-royce.com

Copyright © 2013 by Nolan, Pickard. Published and used by INCOSE with permission

Abstract. A complex system almost always remains uncertain late into its development. In gas turbine engine control systems at Rolls-Royce, typically 50% of the development costs of the software can be spent on corrections and modifications (scrap & rework). The scrap & rework is caused by both the evolution of the system and risks in the design and implementation. The paper summarises over 10 years of research in measuring, managing and reducing scrap & rework.