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Title of the Presentation:

**Design Against Scrap: The
Case for Left-Shift DFM**

Short CV

After graduating the “Politehnica” University of Timisoara (Romania), I started my career as SMT Process Engineer in Flex, more than 15 years ago. From 2009 I moved to Automotive Industry and worked for Forvia(Hella) as a NPI Engineer and later as a Prototyping Manager. Since 2016 I am living in Germany and developed my career in design for manufacturing and design for reliability, working for ZF and Marquardt Group. I joined Siemens EDA in 2022 bringing the practical experience in electronics manufacturing and design for manufacturing.

Abstract

The process of releasing a new PCB layout design is often governed by internal checklists and cross-functional review meetings, which can be time-intensive and prone to inefficiencies. Traditional methods rely heavily on manual validation using Excel-based checklists, covering aspects from design identification to manufacturability and testability. This paper proposes the integration of Design for Manufacturability (DFM) tools to streamline the release process. By leveraging DFM software configured with PCB fabricator-specific constraint profiles, many routine checks can be automated, enabling layout engineers to identify and resolve issues prior to formal reviews. This approach not only reduces meeting durations but also shifts focus toward project-specific challenges that require expert judgment. Furthermore, cloud-based DFM profiles maintained by assembly partners enhance collaboration and ensure alignment with evolving manufacturing capabilities. The proposed methodology advocates for a modernized checklist that begins with a DFM validation step, significantly improving the efficiency and reliability of PCB layout releases.