Case Study: Testing House (Integrated Test Solutions)
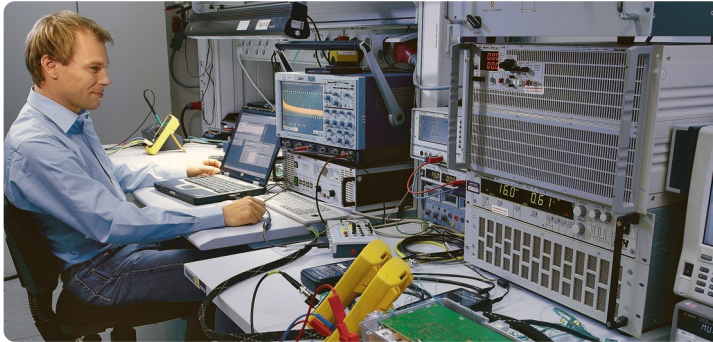

Testing House Integrates FlashRunner into ICT Set

Mr. Juan José Montes, Operations Manager of Testing House Mexico, explains how FlashRunner was profitably used to meet the programming needs of one of their Automotive customers.

> "FlashRunner has proved to be a powerful tool for on-board chip programming. Integrating FlashRunner into an Agilent 3070 set was straightforward with no unpleasant surprises."

Introduction

At Testing House Mexico we've been working with FlashRunner for about a year. Most of the projects we've done consisted on integrating the programming solution into test sets using its standalone features.

This case study is about the integration of FlashRunner into an existing In-Circuit Test Set based on the Agilent 3070 platform. The integration was performed for one Automotive customer.

The Problem

The goal was to program, during the ICT phase, twelve NEC UPD78F0515GA microcontrollers arranged on a 12-board paneled PCB . There was already an ICT set, which consisted on the fixture and test program.

Starting from the existing ICT set, the programming solution to be

developed needed to be:

- Easy to integrate;
- Easy to use for engineers with ICT background;
- Able to reduce programming times, compared to previously used solutions.

The Solution

The programming method used before FlashRunner was based on routines developed using standard Agilent 3070 code for digital test sequences.

Such coding was complex even for expert engineers, and resulting programming time was about 20 seconds for each unit.

Testing House selected FlashRunner as a solution because:

- In previous uses for similar applications, the FlashRunner solution provided easy ATE integration, ease of use and reliability.
- Estimated programming time
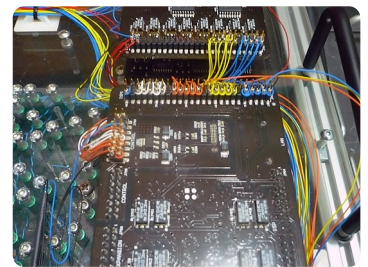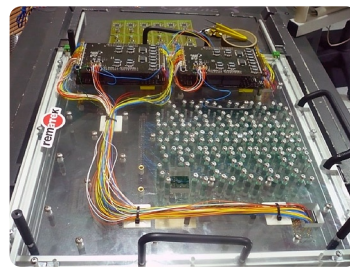
provided by SMH Technologies engineers was between 7 and 15 seconds per device, which was perfect for achieving the goal of programming time reduction.

- The existence of a specific FlashRunner model suitable for panel applications (FR01M01).

The final solution was easy to setup for the test engineers in charge of the ICT set, and allowed operators to program each microcontroller in the 12-board panel in a transparent way.

Programming time for a single NEC

microcontroller was reduced from 20 seconds of the previous solution to 8 seconds; resulting code complexity was also lower than the original solution's. Initially the 12 UUT were programmed sequentially, but based on suggestions and previous research from our customer's engineering team it was possible to perform a "two UUT" simultaneous programming sequence which reduced the programming time for the complete panel from 100 seconds to 60 seconds.

> "For Testing House, SMH solutions have proved to be extremely useful in our permanent mission of producing satisfied customers."

About Testing House

TESTING HOUSE

Testing House (www.testinghouse.com) is a Total Test Solution Providing company to pioneer and lead TTSP (Total Test Service Providers) market. Testing House offers both functional and in-circuit test development engineering services for the electronic industry. Currently with close to 45 employees, Testing House has branch offices in California, Texas, Alabama, Mexico, South Korea, China (Shenzhen), Malaysia (Penang), and Singapore (JB).