
FTI STUDIO™ PART AVERAGE TEST MANUAL

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1. INTRODUCTION

Part Average Test, also known as PAT, is a tool in FTI Studio™ that implements AEC Q001 Rev C.

2. ALGORITHM

The algorithm follows the specification with the following deviations and additions:

- 1) Static limits are always applied even when dynamic limits are in force.
- 2) At least 20 devices must be tested and must pass the static limits before dynamic limits are applied.
- 3) Static limits are applied at the end of test before handler exchange and affect the handler binning.
- 4) Dynamic limits are applied when the lot closes, and the datalog is updated, however handler binning is not. Parts must be serialized and post processed to separate dynamic limit failures.

Note: Both static and dynamic limits can be used, however dynamic limits only calculate using data from the current lot. The current implementation cannot create limits using data from multiple lots. Calculating limits from multiple lots requires integrating PAT with a third party PAT database. See FTI Sales for a quotation on integrating PAT to your database.

3. USING PAT

As an example, let's begin with a test that generates random data.

```
public partial class TestMethod : DesignableTestMethod
{
    private FTI.Utility.Gaussian g = new Gaussian(42);

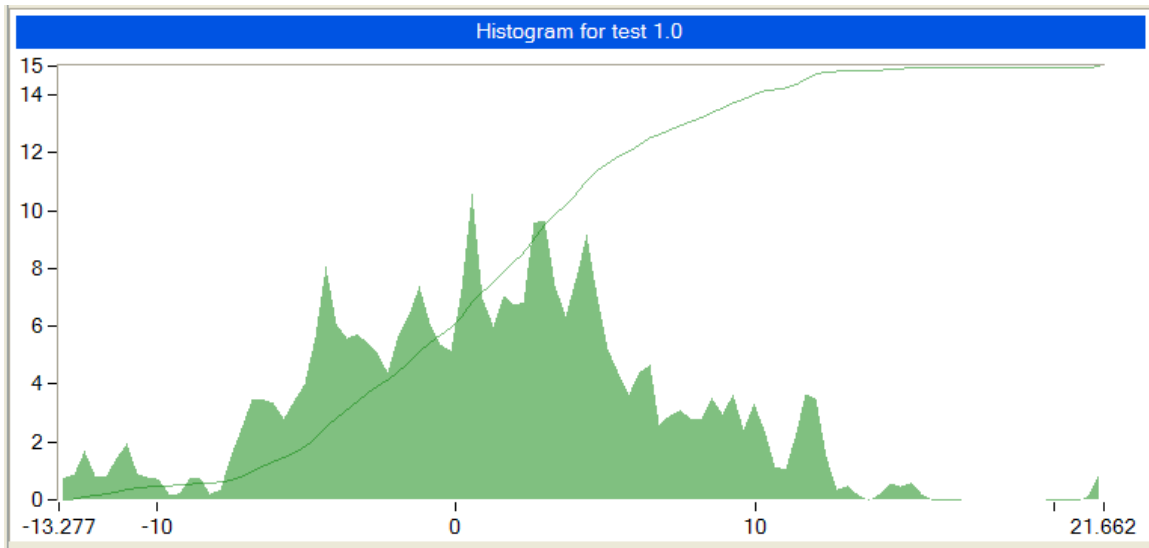
    private void PreRun(TestMethodPreRunArgs e)
    {
    }

    private void Run(TestMethodRunArgs e)
    {
        g.Mean = 1.0;
        g.Sigma = 6.0;

        double d = g.NextDouble();
        e.TestAndLogData(0, e.Config.ValueMin, d, e.Config.ValueMax, "Value", "");
    }

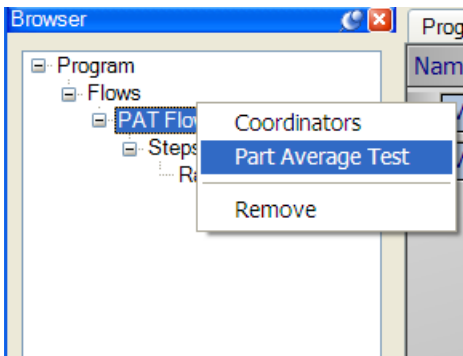
    private void PostRun(TestMethodPostRunArgs e)
    {
    }
}
```

Running this test a few hundred times produces the following data:

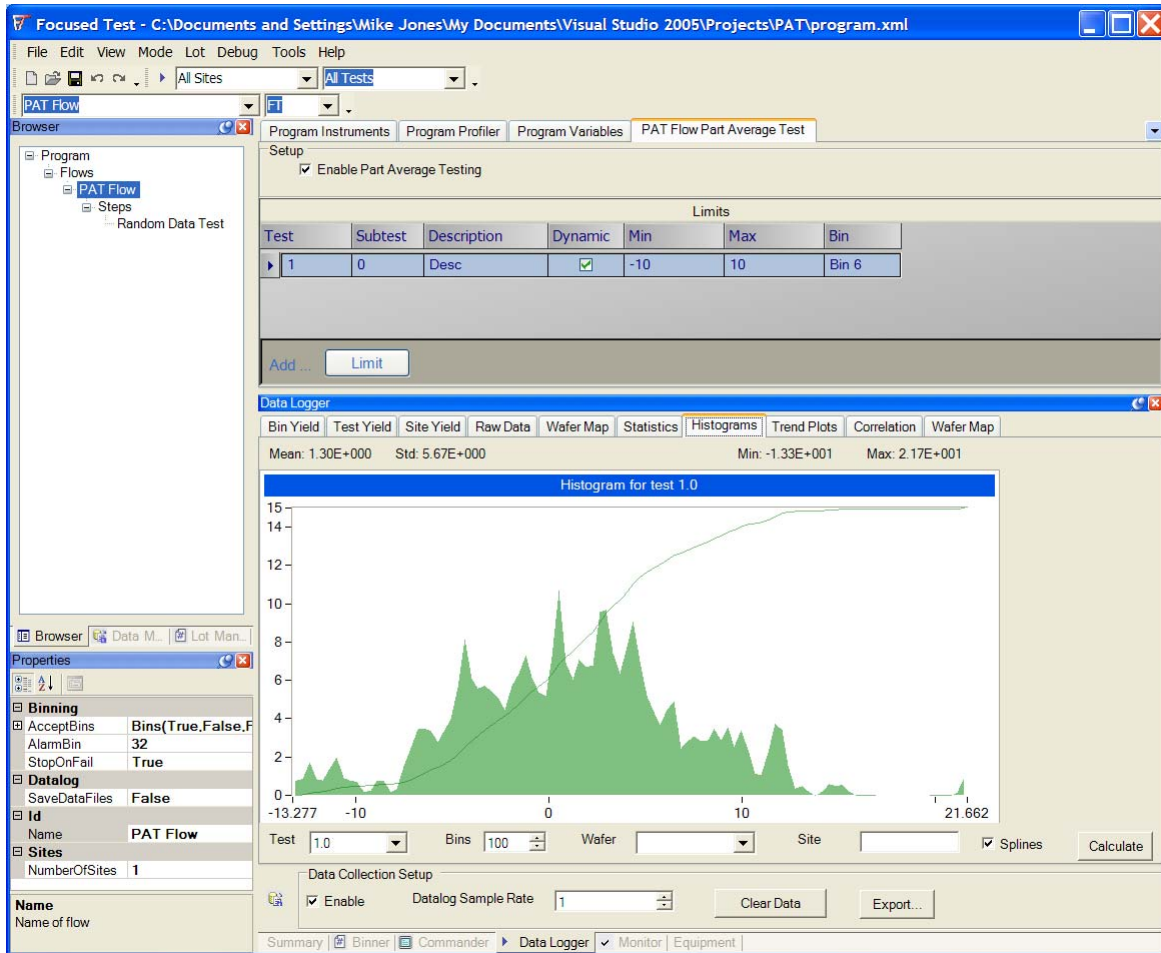


SETTING THE PARAMETERS

The parameters are set in the PAT tab. To display the PAT tab, right click on the program node and select it:



This will produce a tab like the following:



Press on the Limit button to add more limits. Then, fill in the test, subtest, description, min, max and bin number. Check Dynamic to use dynamic limits. Remember that dynamic limits are applied when a lot closes.

