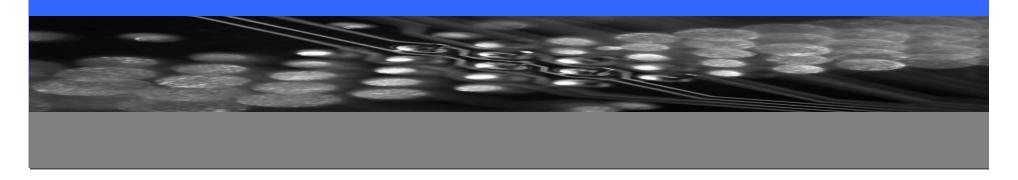


"If It's Anagon, It's Automatic!"

World Class Automatic Manufacturing Test And Test Information Solutions











Multi- Station Solution

Multi-Site, Multi-Station Solution

Anagon Presentation Outline

- Anagon Overview
- Strategic Problems/Opportunities
- Anagon Solutions
- Typical Business Tie-Ins
- Summary

Anagon Corporation

- A Successful Design Engineering Services Firm, In Our Ninth Year Of Business, Located In Hudson, MA.
- We Focus On High Technology Clients Who Make Complex Electronics Products, Helping Them Ramp To Volume Manufacturing.
- We Provide World Class, Scalable, Manufacturing Test Solutions To High Technology Clients, Large And Small.

Anagon Corporation

- Our Engineering Team Has Over 100 Years Of Automated-Test Experience Designing Test Stations, Test Software, & Test Information Systems.
- Diverse Industry Backgrounds: Telecom, ATE, Defense, Audio, Consumer, Industrial, Computer, Medical Electronics, Automotive.
- Hard To Find Combination Of "Design Engineering Strength" And "Practical Manufacturing Experience."

"Anagon" Manufacturing Floors

- GenRad, Westford, MA
- Kachura Industries, Winber, PA
- Yurie Systems, Landover, MD
- Lucent, Landover, MD
- IEC, Newark, NY
- Solectron, Westboro, MA
- Jabil Circuits, Billerica, MA
- Microtouch, Methuen, MA
- Mercury Computer, Chelmsford, MA
- ElTech, Lowell, MA
- EMC², Franklin, MA
- EMC², Cork, Ireland

- Sanmina, Manchester, NH
- Benchmark, Hudson, NH
- Interspeed, N.Andover, MA
- Lucent, Andover, MA
- Tellium, Oceanport, NJ
- Tellium, W. Longbranch, NJ
- Coriolis, Boxboro, MA
- Top Layer, Westboro, MA
- BOSE, San Luis, Mexico
- Telsima, Acton, MA
- ACT, Hudson, MA

Anagon's Client List

- GenRad
- Yurie Systems
- Lucent Technologies (Bell Labs)
- Lucent Technologies (Prominet)
- MicroTouch (3M)
- Interspeed Networks
- Bose
- Crossbeam Systems
- Telsima
- Caliper Life Sciences

- Sycamore Networks
- Tellium
- Coriolis Networks
- Lockheed-Martin Information Systems
- Top Layer Networks
- Mercury Computer Systems
- EMC²
- Teradyne
- Revolabs

Anagon Client Case Study: Yurie Systems, Landover, MD (1996 – 1999)



Dr. Jeong H. Kim Yurie Systems Founder, Chairman, CEO, & Majority Owner

1992: Founded Yurie Systems

1995: Developed LDR 200 Product Family, First Commercially Successful ATM (Asynchronous Transfer Mode) Product In U.S.

1996 - 1999: Hired Anagon To Develop And Execute Manufacturing Test Strategy And Infrastructure

1997: Successful IPO, Then Sold Yurie To Lucent For \$1B (Jeong Owned 51% = \$510M)

2005: President, Bell Labs

Anagon Client Case Study: Yurie Systems, Landover, MD (1996 – 1999)

Full Manufacturing Test Solution: 3 Engineers: 3 Years

Customer Need: In 4Q96, Shipped Engineering Quantities (~200) LDR200 Modules. Needed To Ship Manufacturing Quantities (~1800) In 3 Months!

Solution Phase 1: Anagon Defined, Designed,
Developed, and Deployed 10 Test Stations And ~20
Test Sequences On 3 Floors 1Q97. (Made The
Numbers; Impressed The Analysts; Superb IPO)

Solution Phase 2: Anagon Defined And Designed A Full Manufacturing Test Strategy And Helped Yurie Build Out It's Manufacturing Test Infrastructure.

Solution Phase 3: After Lucent Buyout, Deployed Entire Manufacturing Test Infrastructure To Solectron, Westboro, MA. (Ramped To \$25M/Quarter Using Original Architecture!)













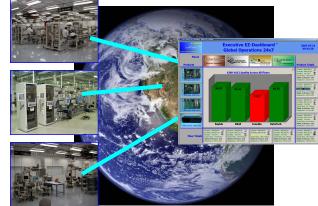
Anagon's Architecture Is Designed To Scale

- Anagon Solutions Fit Your Stage Of Development.
- Expand Your Solutions As Your Company Grows.
- With Anagon, The Test Infrastructure You Start With Is The One You Finish With.









Multi- Station Solution

Multi-Site, Multi-Station Solution

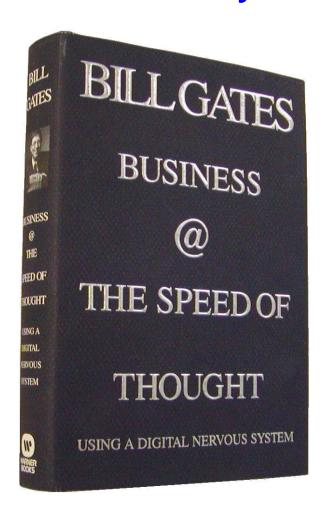
Controlling The Quality Of High Performance, Complex, Electronics Systems Is A Challenge!

- Poor Product Quality = Bad Company Reputation
- How Good Is Your Design? (Design Margins)
- How Good Is Your Manufacturing Process? (Manufacturing Variance)
- If You Really Don't Know, You Will Probably Not Succeed.

Potential Customers Scrutinize Your Operations!

- Once You Get By The Technical Hurdles, Your Operations Are Evaluated.
- What's Your Manufacturing Test Strategy? What Kind Of Quality System Is In Place? How Do You Control Your Contract Manufacturers?
- A State Of The Art Manufacturing Infrastructure Can Be A Huge Competitive Advantage.

21st Century Companies Need To Use Information!



"How You Gather, Manage, And Use Information Will Determine Whether You Win Or Lose."

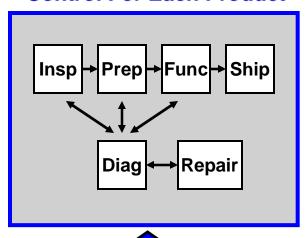
"People Have Lived For So Long Without Information At Their Fingertips That They Don't Realize What They Are missing."

"... VP's From Different Departments Show Up At High Level Meetings With Different Data!"

Quick "Strategic Issues" Recap:

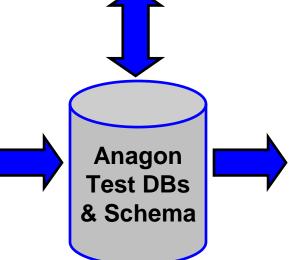
- Product Quality: How Good The Design? Manufacturing Variance?
- Your Customers Will Scrutinize Your Operations: Modern Manufacturing Infrastructure? Do You Understand And Control Your Quality?
- Information In The 21st Century Is A Competitive Necessity

Automatic Floor Routing & Control For Each Product



World Class Automated Test On The Manufacturing Floor

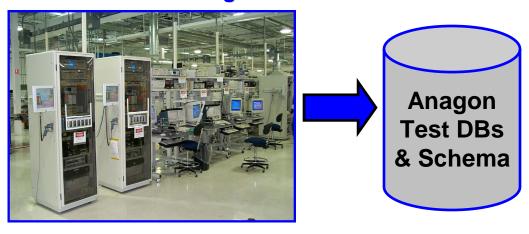




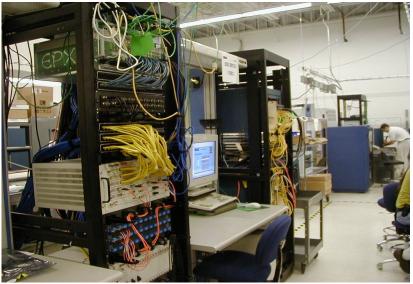
24/7 Worldwide Test Information Delivery



World Class Automated Test On The Manufacturing Floor







We Design Automated Test Stations That Support Your Manufacturing Test Strategy Specifications:

We Typically Work Directly With Your Architects And Engineers To Develop A Comprehensive Test Strategy.

We Have Deep Technical Knowledge Of Automated Electronic Measurements And Instrumentation.

We Provide Test Station Definition, Design, Construction, Integration, And Deployment Services.



We Provide ATest™, A Powerful, Flexible, Test Execution And Development Environment.

Test Sequences Can Be Quickly Designed To Provide Step By Step Instructions And Pictures For Low Skilled Operators.

Hundreds Of Tests Can Be Rapidly Executed Using Complex Instrumentation For Every Unit Produced.

All Resulting Measurement Can Be Analyzed And Saved Into Anagon Test Databases



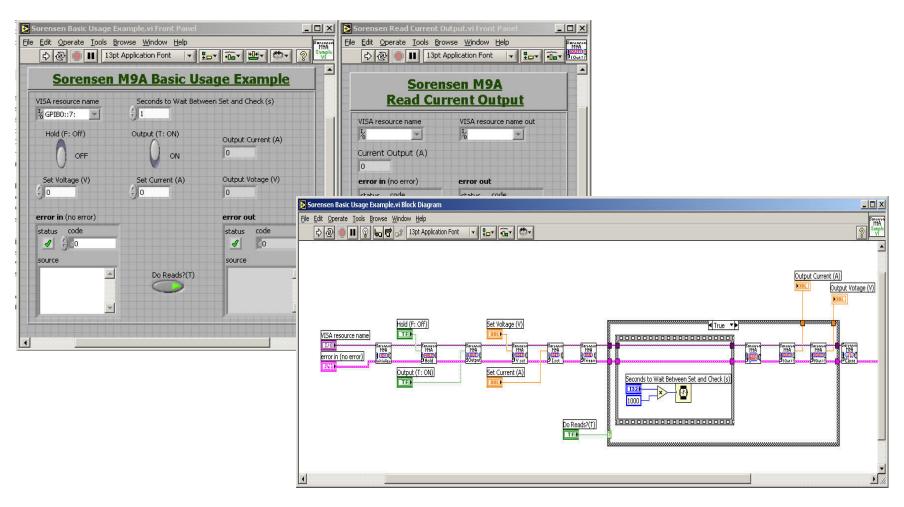
We Provide ATest™, A Powerful, Flexible, Test Execution And Development Environment.

ATest[™] Supports A Large Library Of Instrument Drivers From All Major Vendors.

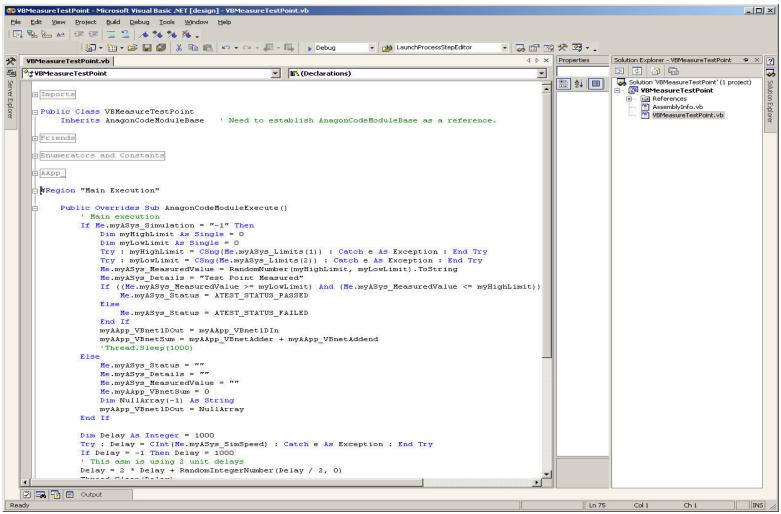
ATest[™] Contains A Flexible Set Of Code Assemblies That Perform Common System Tasks.

ATest[™] Has A Powerful Debug Environment That Makes Test Development Efficient.

ATest™ Directly Supports LabVIEW® Programming

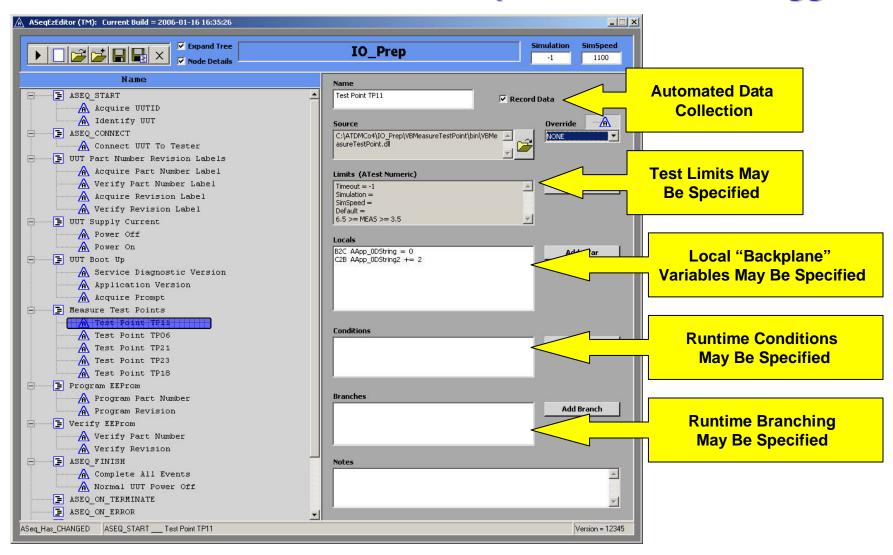


ATest™ Directly Supports .Net® Programming

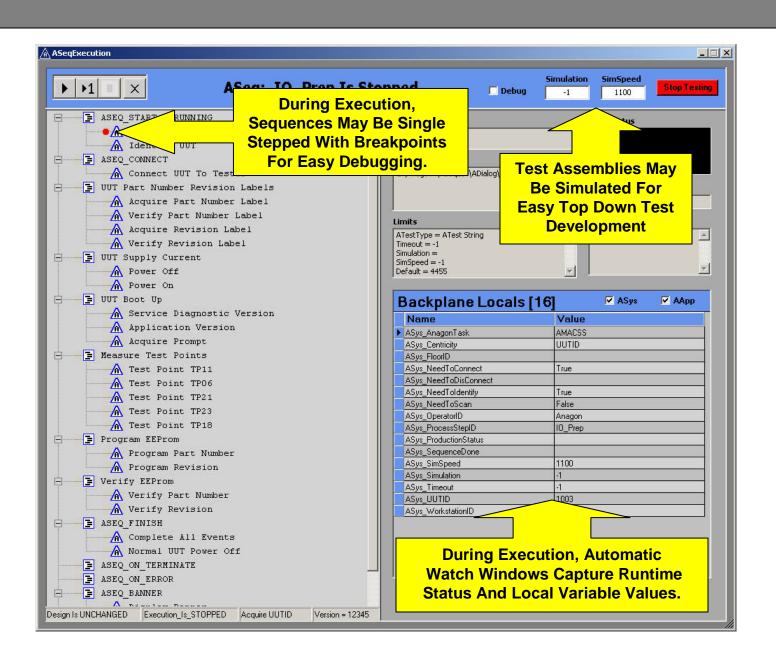


.Net Is A Registered Trademark Of Microsoft Corporation, Redmond, WA

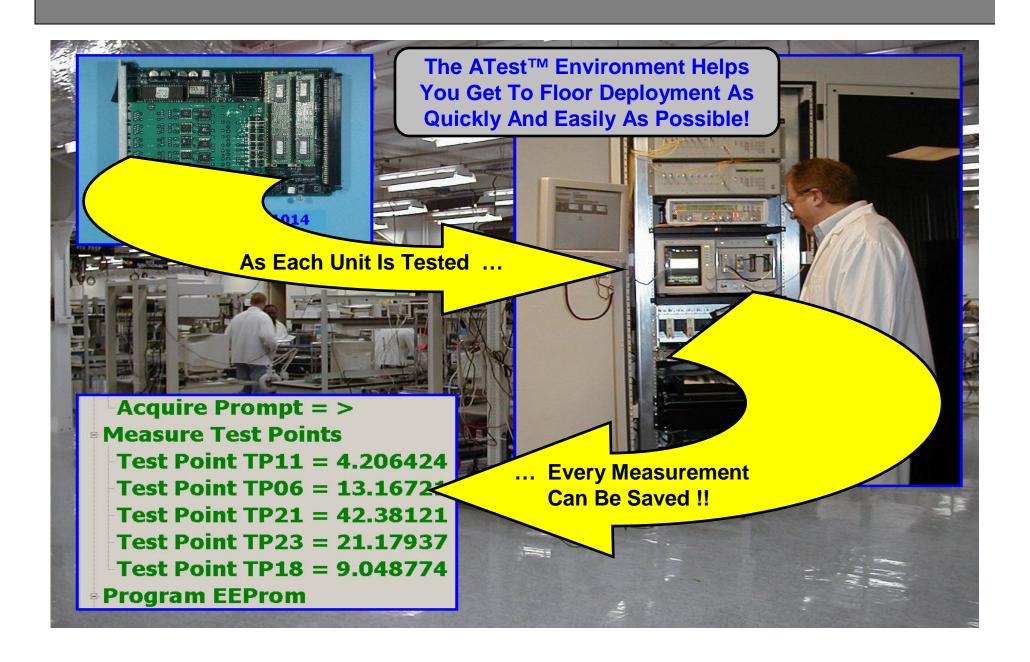
ATest™ Has A Powerful Sequence Editor/Debugger



ATest™ Details



ATest™ Details



Our <u>Automated Test Stations</u> Rapidly Make 100's Of Electronics Measurements On Every Unit Produced!

This Ensures That <u>Each Unit</u> Is Tested The <u>Same</u> Way, Every Time, Automatically, With No Mistakes!

Low Skilled Operators Can Be Used.

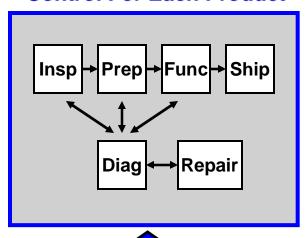
World Class Automated Test On The Manufacturing Floor





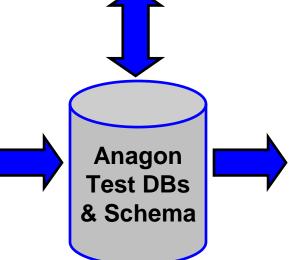
Strategic Benefits:
Measure Your Design
Measure Process Variance
Impress Your Customers

Automatic Floor Routing & Control For Each Product



World Class Automated Test On The Manufacturing Floor

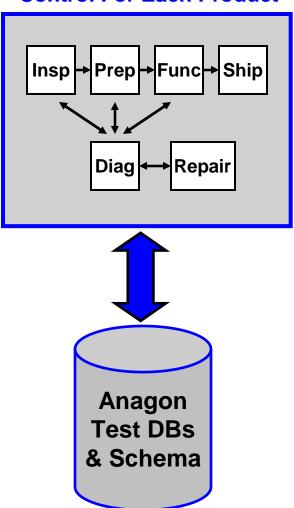


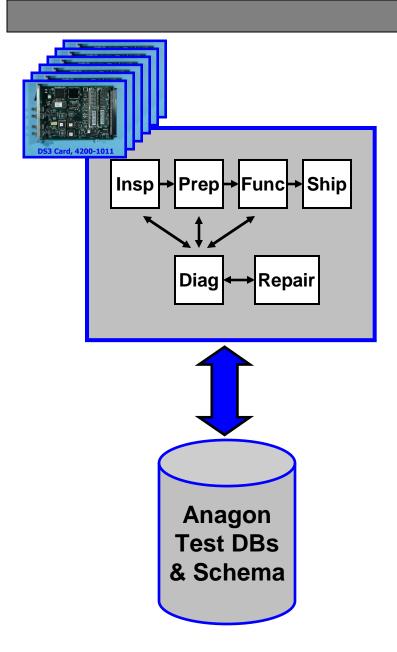


24/7 Worldwide Test Information Delivery



Automatic Floor Routing & Control For Each Product





To Understand Your Process, You Must Automatically Control And Manage The Manufacturing Floor.

Complex Products Are Fabricated, Inspected, Programmed, And Tested In Defined Steps, Before Shipping To Customers.

Mistakes May Occur As Hundreds Of Units Are Moved And Processed At Different Test Stations By Low Skilled Personnel.

AMacss[™] Eliminates Floor Chaos And Ensures That Each Product Is Correctly Routed To All Specified Process Steps.



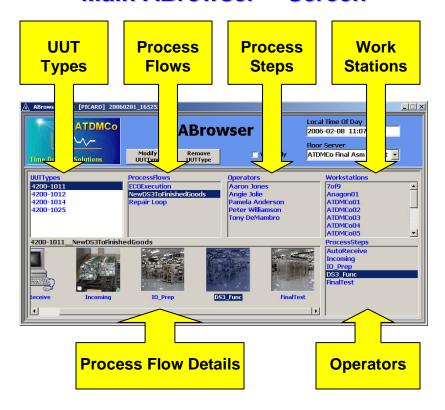
AMacss™ Uses A Powerful Model Of The Manufacturing Floor And Its Processes.

Based On Years Of Practical Manufacturing Experience, Anagon Has Developed A Flexible Data Model That Embodies AMacss.

Your <u>Actual</u> Test Stations, Process Steps, UUT Types, Operators, And Process Flows Can Be Modeled Directly Into The System.

The Model Is Read Instantaneously By All Test Stations On The Floor, Thus Providing Control And Management Automatically.

Main ABrowser™ Screen



ABrowser[™] Provides An Easy To Use, Graphical User Interface To Input And Maintain Your Model.

The Main Screen Provides An Executive Overview Of The Floor, Highlighting The Relationships Among Major Floor Objects.

The Major AMacss Objects Are: UUTType*, ECO, ProcessFlow, ProcessStep, Workstation, And Operator.

Each Object Has Its Own Editor, Which Allows Your Administrator To Add, Modify, Or Remove It.

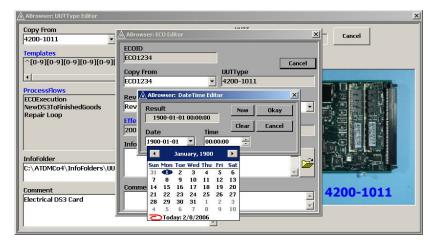
UUTType Editor



ABrowser™ Provides An Easy To Use, Graphical User Interface To Input And Maintain Your Model.

UUTType (Part Number) Is "What" Is Being Tested. Typically, Several Different Types Of Units Are On The Floor.

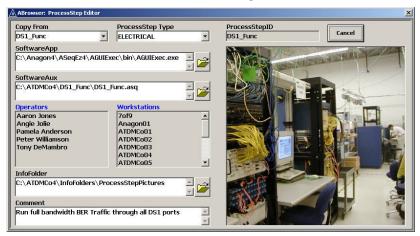
ECO Editor



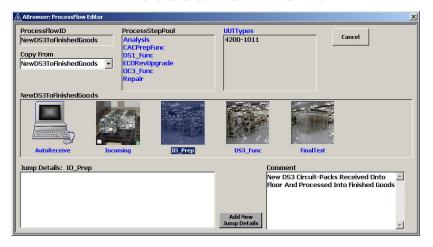
Generally, Each UUTType Is Tested Along Different ProcessFlows And Has A Unique ECO History.

ECO's Document Engineering Changes To UUTTypes. As Each ECO Is Sent To The Floor, Routing Is Automatically Adjusted.

ProcessStep Editor



ProcessFlow Editor



ABrowser[™] Provides An Easy To Use, Graphical User Interface To Input And Maintain Your Model.

ProcessSteps Are Value Added Operations That Are Performed On UUTs (Inspection, Repair, Programming, Electrical Test).

ProcessSteps, Such As "DS1_Func", Execute Customized Test Sequences Developed By Test Engineers Using Anagon's ATest™.

ProcessFlows Specify An Ordered Set Of ProcessSteps That Accomplish A Collective Goal ("NewDS3ToFinishedGoods").

Workstation Editor



Operator Editor



ABrowser[™] Provides An Easy To Use, Graphical User Interface To Input And Maintain Your Model.

Workstations Are Physical Collections Of Equipment On Which ProcessSteps Are Executed Against UUTs.

Workstations Typically Consist Of Fixtures, Computers, Electronic Instruments, Bar Code Scanners, Cabinetry, And Cabling.

Operators Are People Who Work On The Floor. Different Roles Are Modeled. Passwords And Privilege Levels Are Stored.



ATraveler™ Provides Detailed History Of Any Individual UUT.

UUT Status Such As: Revision, ECO, And Genealogy Is Shown.

All Events, Steps, And Measurements Are Shown In Chronological Order.

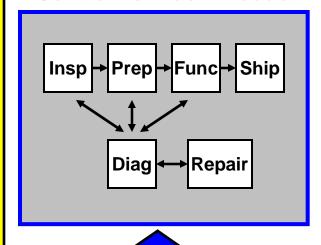
Details Of Events, Steps, And Measurements Are Shown.

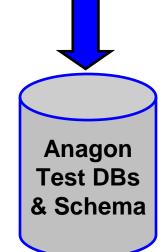
Complex Products Are Fabricated, Inspected, Programmed, And Tested In Defined Steps, Before Shipping To Customers.

Mistakes May Occur As
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Our System Eliminates
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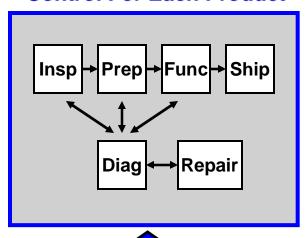
Automatic Floor Routing & Control For Each Product





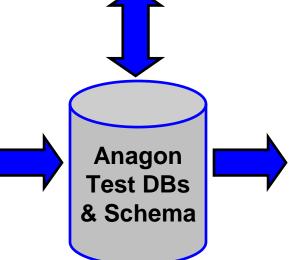
Strategic Benefits:
Reduce Process Variance
Control Your CM's
Impress Your Customers

Automatic Floor Routing & Control For Each Product



World Class Automated Test On The Manufacturing Floor

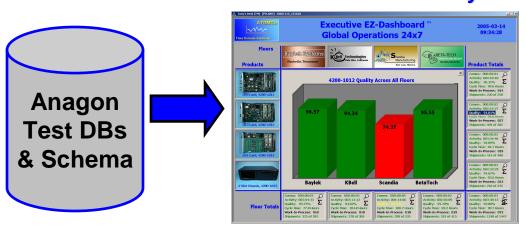




24/7 Worldwide Test Information Delivery



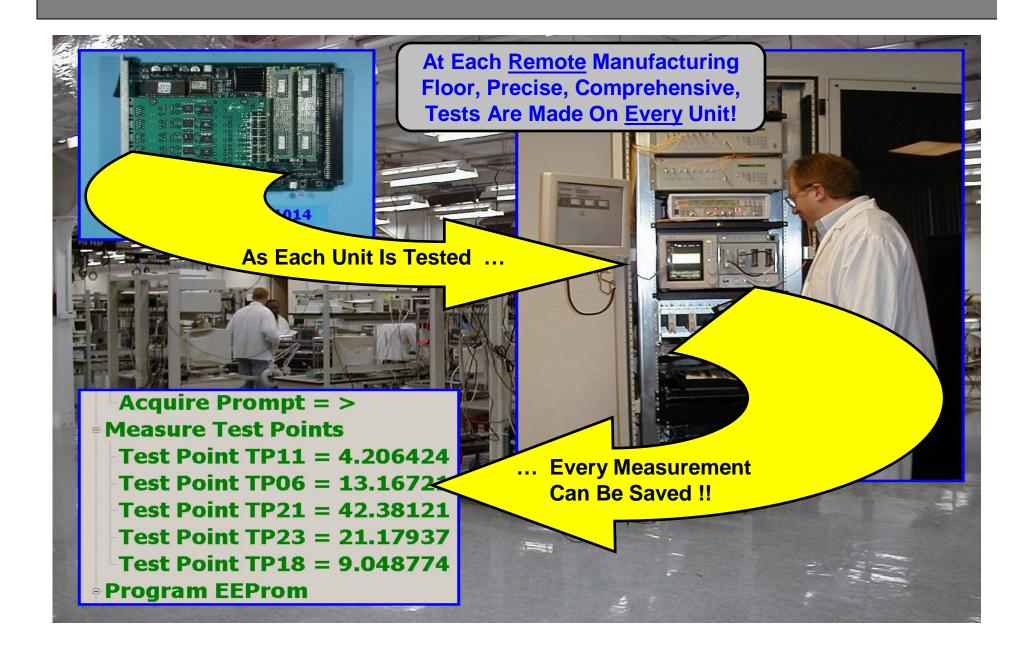
24/7 Worldwide Test **Information Delivery**



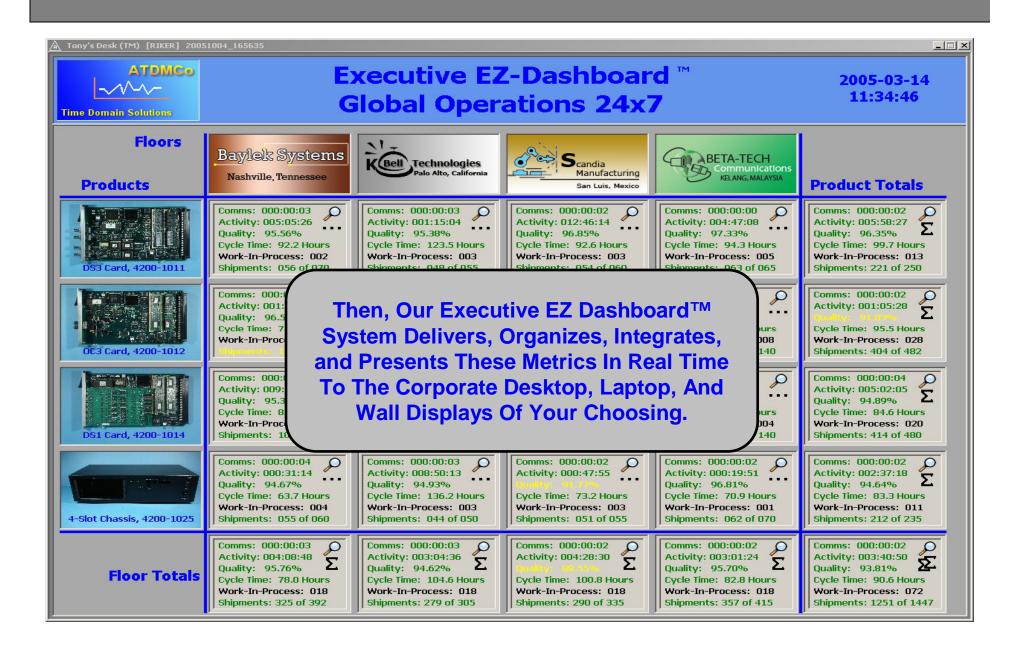




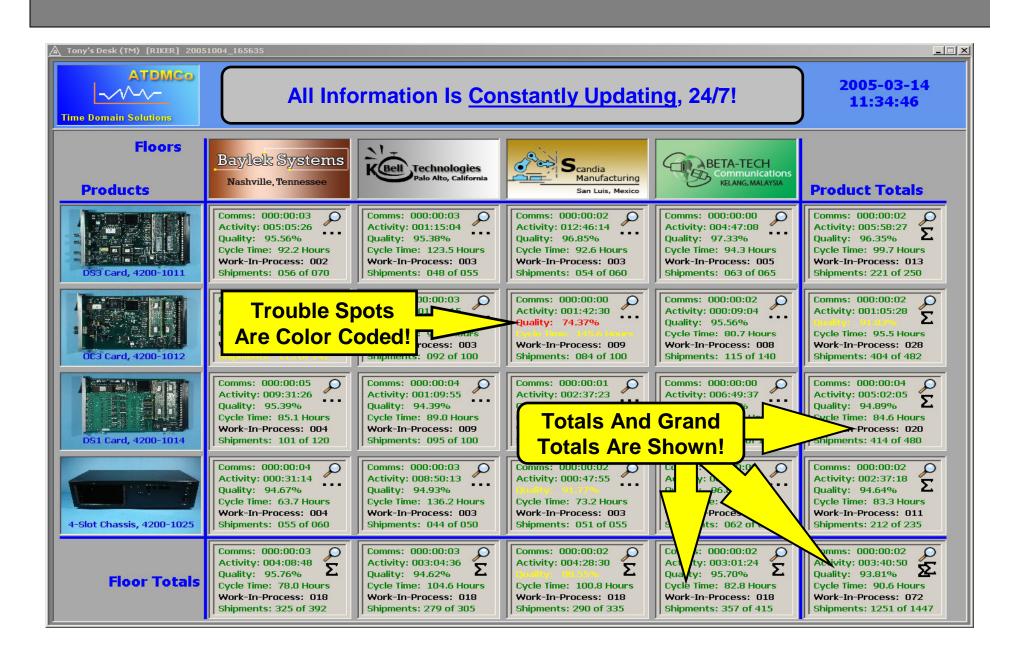
Executive EZ Dashboard™ Details





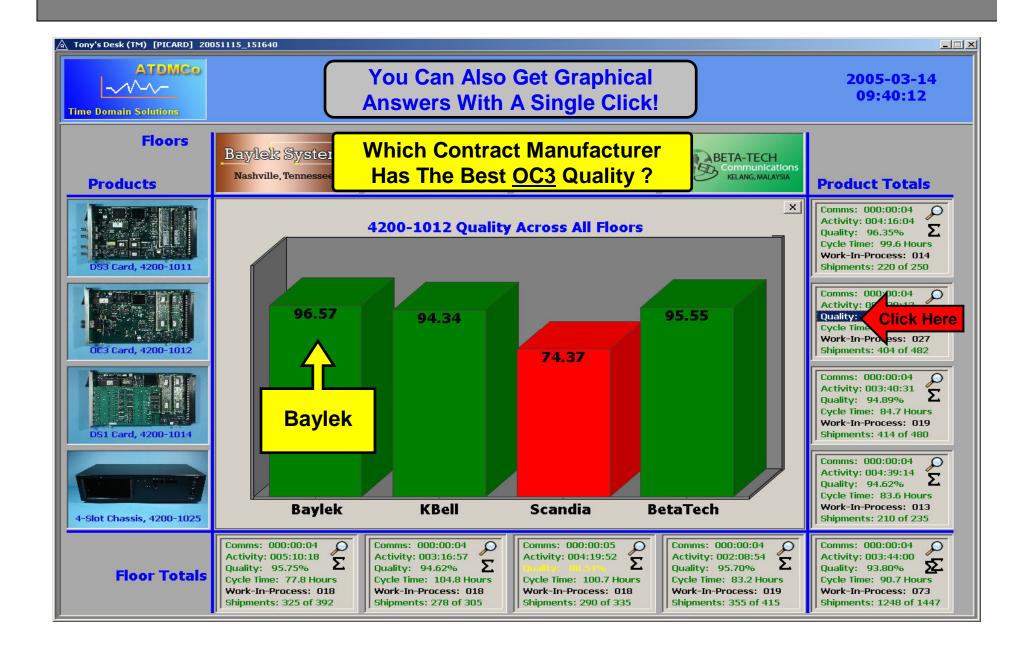


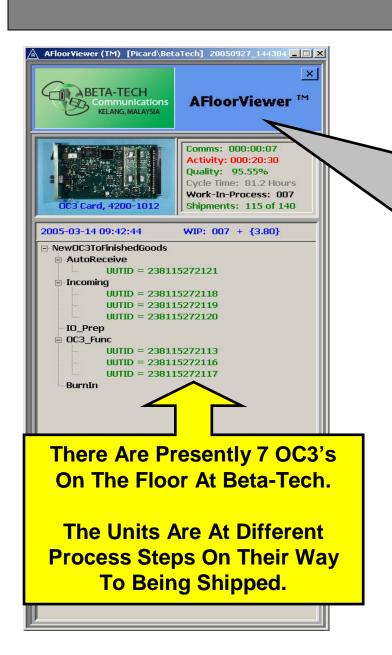






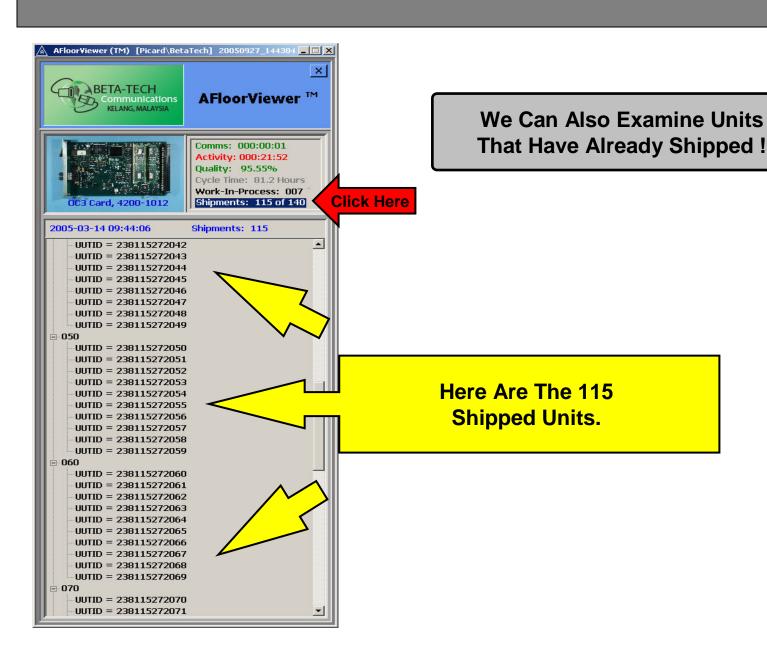
Executive EZ Dashboard™ Details

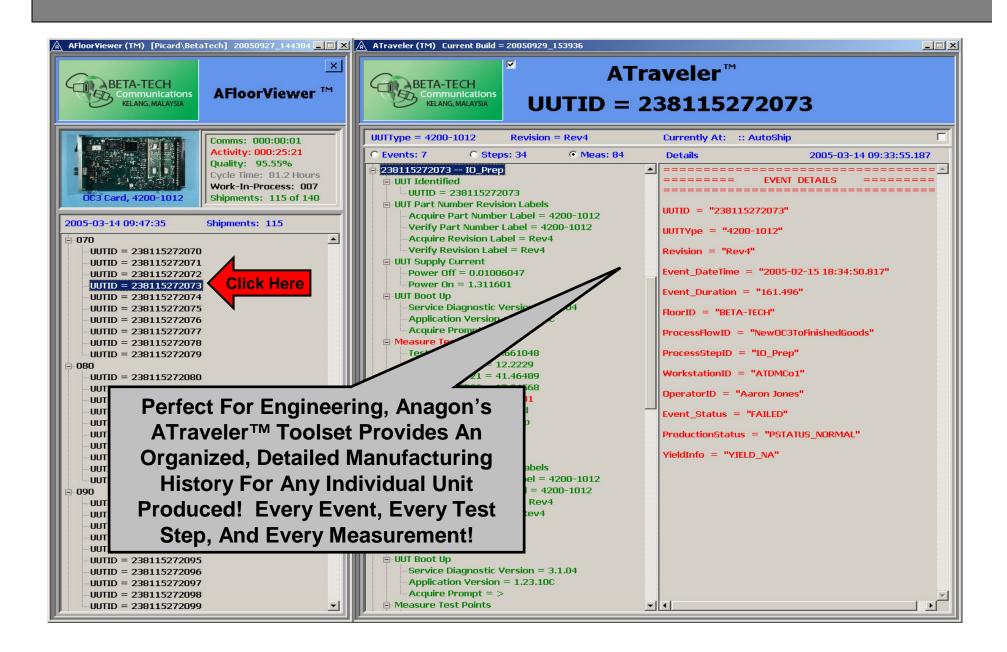




If You Need Backup Details, Simply Click On The Cell Of Interest And Anagon's **AFloorViewer™ Provides Detailed Status** Within The Contract Manufacturer Floor!









As Each Unit Is Tested, Resulting Measurements
Can Be Saved And Organized Into <u>Test Information</u>.

This Information Can Be Used To Measure Product Quality, Process Variance, Shipments, And WIP.

Our System Automatically Delivers This Information From Remote Floors Directly To Your Office, 24/7.

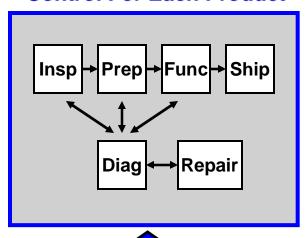
Strategic Benefits:
Understand Your Quality
Impress Your Customers
Be Information Driven

Anagon Test DBs & Schema

24/7 Worldwide Test Information Delivery

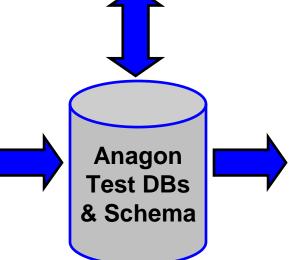


Automatic Floor Routing & Control For Each Product



World Class Automated Test On The Manufacturing Floor





24/7 Worldwide Test Information Delivery



Anagon Test Databases & Schema Provide Key Enabling Technology For Test Information Architecture.

Anagon
Test DBs
& Schema

Fourth Generation Design Optimized For Manufacturing Test & Test Information.

Designed On Industry Standard Microsoft SQL Server For Easy Client IT Integration.

Scaleable, Professional Strength, High Performance, Enterprise Databases.

Anagon Test Databases & Schema Provide Key Enabling Technology For Test Information Architecture.

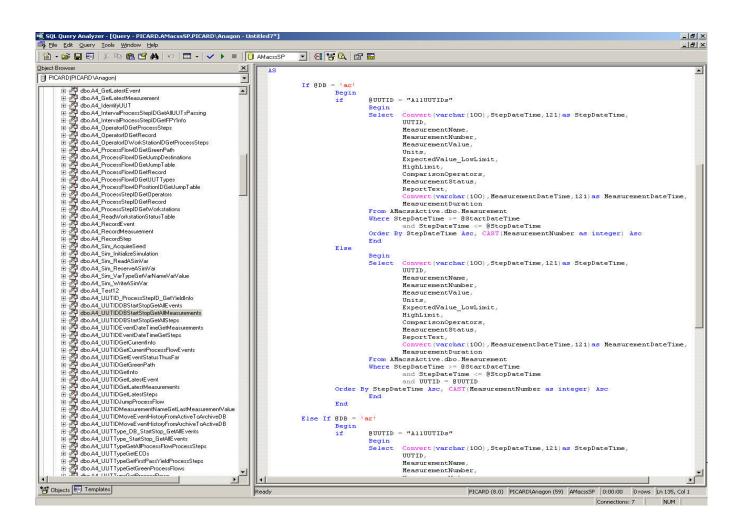
Anagon
Test DBs
& Schema

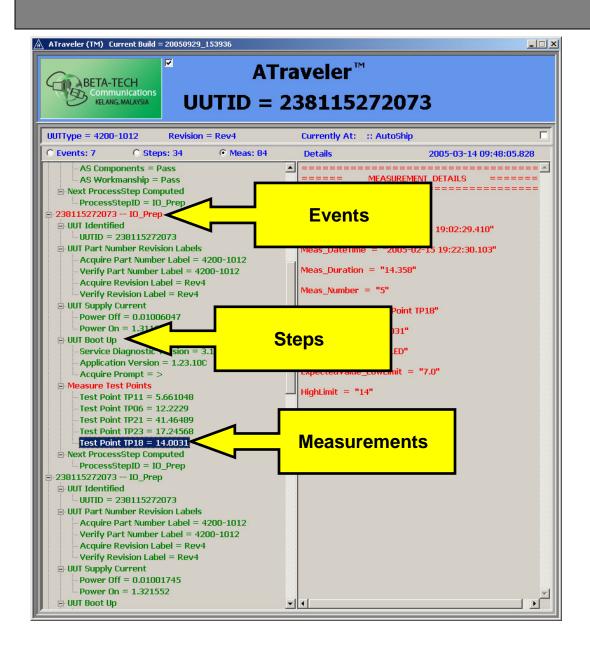
Industrial Strength Microsoft SQL Server Security, Password Protection, & Backup.

Extensive Use Of Transact-SQL Stored Procedures.

Internet Ready Now; .Net Compatible Into The Foreseeable Future!

Much Anagon Code Is Embodied In Transact-SQL Stored Procedures



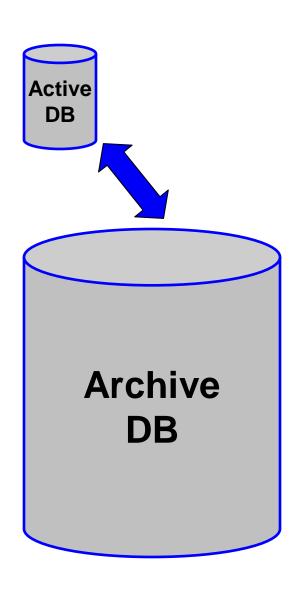


Anagon Systems Instantly Organizes Tester Data Into Hierarchical UUT Information.

Events Record What Happens To A Specific UUT During A ProcessStep (Usually Via A Test Sequence.)

<u>Steps</u> Record Major Test Missions (IE: Verifying UUT Boot Up).

Measurements Record Details Of Electronic Tests And Process Actions.



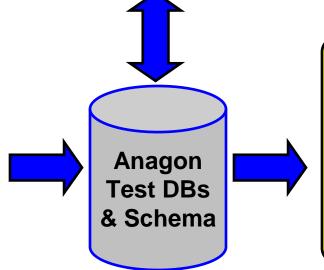
Anagon's Floor DB Architecture Employs Active And Archive DBs

The Active DB Is Optimized For Size And Performance And Represents Only UUT's That Are On The Floor Right Now.

The Archive DB Monotonically Increases Over The Life Of The Products And Contains Histories Of Every UUT Ever Made.

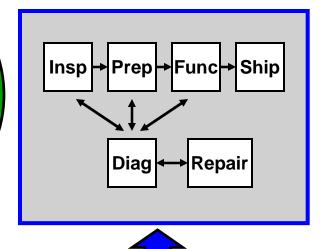
Standard IT Maintenance And Backup Can Be Scheduled Periodically Depending On Policy, Using Industry Standard Tools. Your Floor Parameters Are
Modeled & Maintained
Inside Anagon Databases
So That You Can Easily &
Automatically Control &
Monitor Remote Operations.

As Each Unit Is Tested, All Measurements Are Saved, Organized, And Archived Inside Anagon Databases.



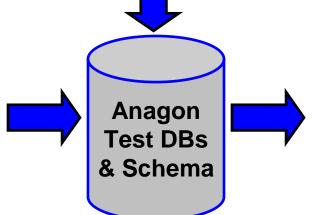
Large Amounts Of Test Data Are Continuously Compiled Into Vital Test Information And Delivered Across The Internet To Your Desktop. Strategic Benefits:
Measure Your Design
Reduce Process Variance
Understand Your Quality
Control Your CM's
Impress Your Customers
Be Information Driven

Automatic Floor Routing & Control For Each Product



World Class Automated Test On The Manufacturing Floor





24/7 Worldwide Test Information Delivery



ECO's --- PLM
(Product Lifecycle
Management)
Design Engineering
(Agile, Adonix, ...)

ERP/MRP
(Enterprise/
Manufacturing
Resource Planning)
(SAP, Oracle, ...)

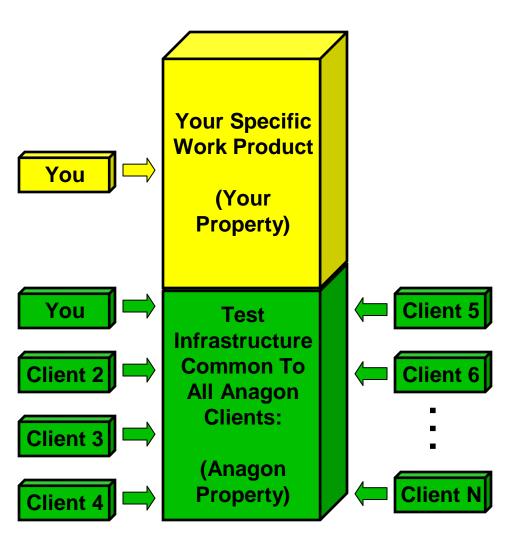
Electronic
Measurements
Manufacturing Test
Auto-Floor Routing
Test Information
Quality Details

Anagon Complements Existing PLM And ERP/MRP Systems, Providing Distinct Functionality.

PLM Systems Provide Infrastructure In Engineering To Manage Product Designs And Releases (ECO's).

ERP/MRP Are Planning, Purchasing, Financial, And Ordering Systems. (High Level, Batch Oriented, And Non-Technical.)

Anagon Systems Produce Detailed Electronic Measurements, Measurement Based Floor Routing, And Test Information Delivery.



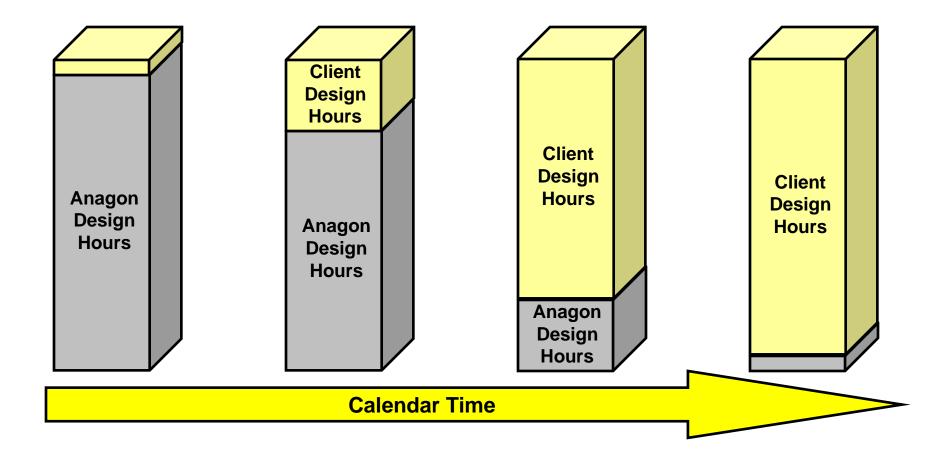
Full Working Test Solution = Specific Client Work + Common Test Infrastructure.

Client Work Product Is Application Specific (Billed On An Hourly Basis):

- Test Station Designs
- Test Program Sequences
- Specific Tests
- Application Specific Databases
- Special Requests Or Applications

Anagon's IP Provides A High Functionality Base On Which To Develop Client Specific Work Product (Fixed Fee.) Client Work Product Is Developed By Anagon And Client Test Engineers.

Anagon Design Hours Typically Ramp Down Over Calendar Time As Desired.







Manufacturing Complex, High Technology, Electronics Products Is Difficult To Do Successfully!

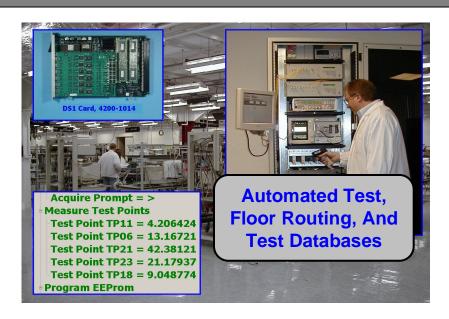
Companies Continually Struggle With Schedules, Quality, and Costs.

Outsourcing To Contract Manufacturers Makes The Struggle More Difficult.

This Battle Is Waged With Little Timely, Accurate, Precise Information.

Often, Companies Don't Have The Best Tools To Get The Job Done Correctly.

Return On Investment For High Quality Manufacturing Tools Is Compelling.





Anagon Has Successfully Deployed World Class Test Solutions On Over 20 Different Manufacturing Floors!

Our Automated Test Stations Make 100's Of Electronics Measurements On Every Unit Produced

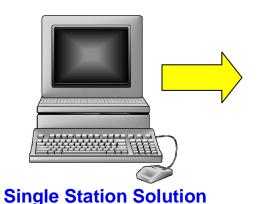
Anagon's Automated Floor Routing System Ensures That Each Unit Is Tested Thoroughly Before Shipment.

Our Proprietary Test Schema And Test Databases Organize And Save All Measurements On Each Unit.

Executive EZ Dashboard™ Delivers Real Time Test Information From Remote Sites Worldwide To The Office Desktop, 24/7.

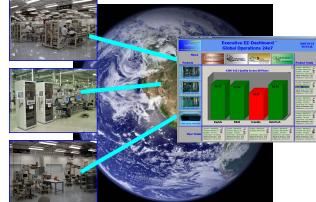
If It's Anagon, It's Automatic!

- Anagon Has Deep Technical Knowledge & Broad Manufacturing Experience.
- We Provide State Of The Art Manufacturing Test Services Customized For You.
- <u>It's Not Just About Test!</u> Our Solutions Address Important Strategic Issues.
- Anagon Solutions Will Grow With Your Company In Size & Scope.









Multi- Station Solution

Multi-Site, Multi-Station Solution