For the control system engineer and project manager

- Dramatically shortens the Factory Acceptance Testing phase of the project.
- Lowers costs of the Factory Acceptance Testing phase of the project.
- Higher quality application software is delivered.

For plant managers and operations supervisors

- Operators are trained prior to startup on the actual system delivered to the field.
- Operators are trained on a process specific model.
- Operators are trained on the look and feel of the new interface.
- Upper management satisfies Process Safety Management Requirements for above.
- Emergency response training introduces process upsets and equipment malfunctions
- Operator re-certification is achieved.
- Operator Education is documented using quiz question and answer.

Details specific to VPLink®'s new Honeywell Plantscape Driver

The engineer does not need any real I/O cards, or any special hardware.
The engineer executes Cape's utility software to align the control database into a VPLink® configuration file.
The engineer is able to debug all aspects of the control software:

- graphics connections
- control language programs
- PID controller action
- interlock logic

Higher level batch management software and/or advanced control solutions will be tested and debugged as well, if implemented.

Requirements

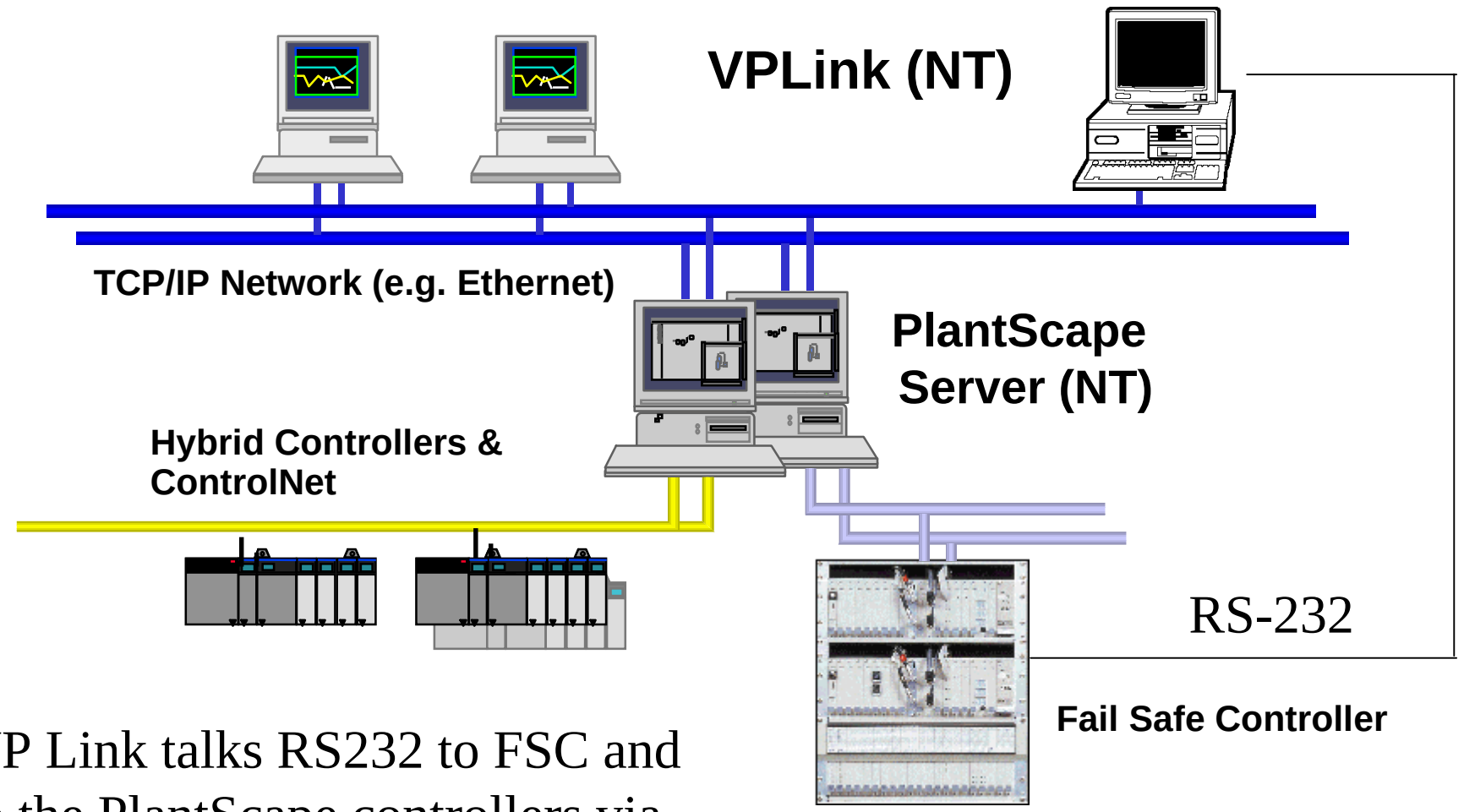
- Honeywell Plantscape system including controller(s) with network interface connector and Plantscape server.
- PC with Ethernet card and WindowsNT
- VPLink® for Plantscape.

Summary

Cape Software is now delivering VPLink® with Honeywell Plantscape driver offering a direct connect solution to the following problems faced by control systems engineers and operations management :
Control software validation
and
Operator console training on process specific requirements.

VPLink® has been in use by the leading chemical, pharmaceutical, refining and pulp & paper manufacturers for over nine years. The VPLink® for Plantscape users has been proven at many plant sites and offers a low cost solution which is easily justifiable within the scope of a single small project (300 I/O point count is typical; 15,000 I/O is large).

PlantScape Operator Stations



VP Link talks RS232 to FSC and to the PlantScape controllers via Ethernet TCP/IP to the server.

Virtual Process

VP Link®

Process Simulation Basics

Questions and Answers for Plantscape® Users

What is Process Simulation? The act of writing values for process variables, ie, field inputs, into the Plantscape using software, not the plant, bypassing real I/O. For Plantscape applications, the simulation software writes values for limit switch positions, motor contacts, flow rates, pressure transmitters, levels, temperatures, low flow switches, any/all inputs to the input assignment. The methodology could be implemented as either simple loop backs, a dynamics process model, or manual intervention.

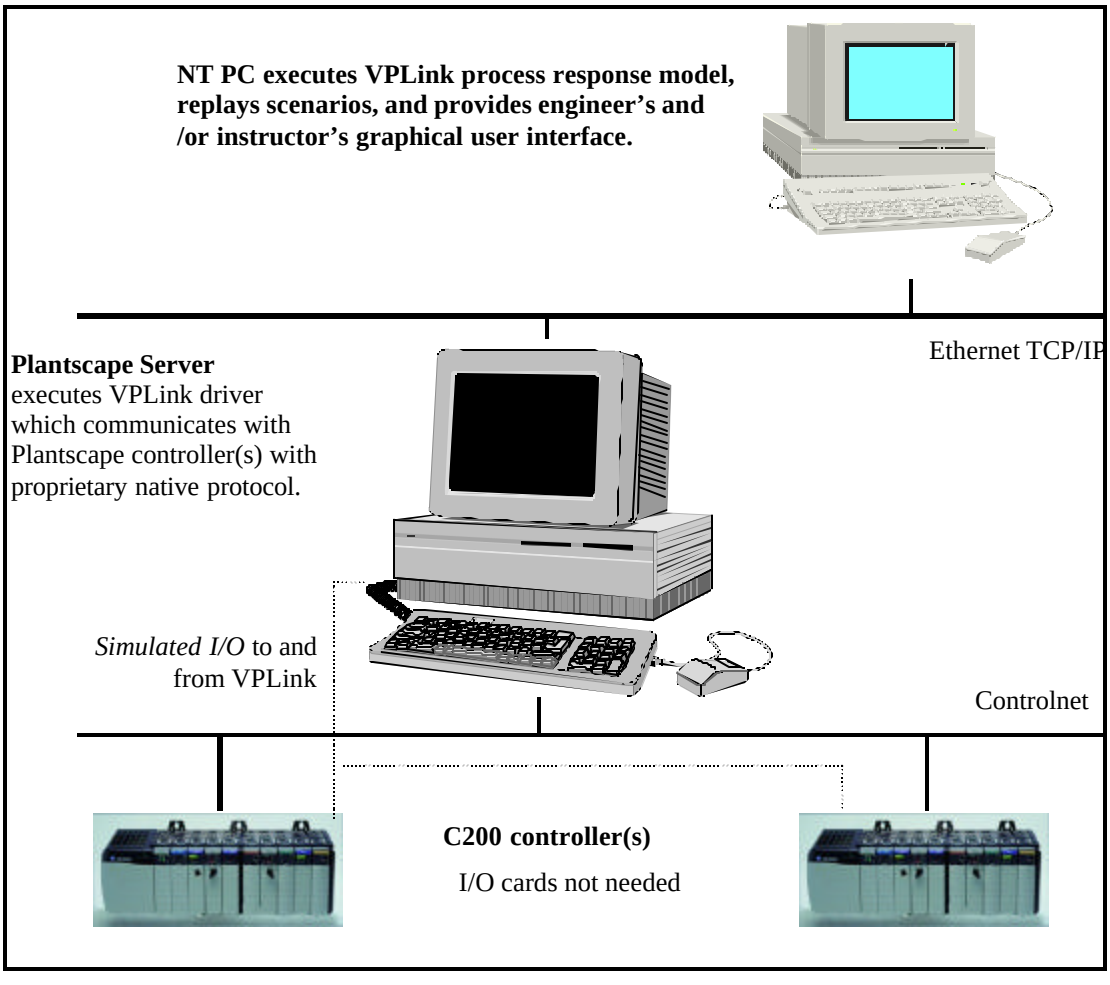
Why Process Simulation? Two Applications: (1) Control system verification/checkout and (2) Operator console training.

When? Before startup or commissioning of the actual system. Or, with the use of a spare offline system, anytime. The earlier, the better... simulation should develop alongside of the control logic implementation. During Acceptance Testing, the simulation is invaluable. For operator training, the week(s) in between F.A.T. and startup are the best time.

Who? Someone familiar with the process responses to the control system outputs. This may be the same person writing the control logic, but is often another individual from the team knowledgeable in the process.

Where? Wherever the system is being staged, or an offline training node can be found.

How? Applying VP Link® from Cape Software, Houston, TX



Benefits during Plantscape system checkout/ verification.

Checkout of graphics links.
Rigorous testing of logic.
Solution is non-invasive.
Testing is documented.
Scenarios automate testing so that many many more sets of input conditions are presented to processor than humanly possible.

Benefits during Operator console training

Trainee works in front of actual console with real displays.
Trainee experiences startup and shutdown logic as well as normal operating conditions.
Trainee experiences upset and fault emergency responses.

User documentation

*VPLink*Ò for Honeywell

*Plantscape*ä

Overview

Cape Software's Virtual Process Link simulation package connects to Honeywell's Plantscape™ system in place of real I/O to provide comprehensive simulation facilities capable of returning realistic process values to the control system.

VPLink connects to Plantscape systems using a native interface developed by Cape. The package is supplied with 'extraction' facilities which read simulator I/O configuration data directly from the system database, and utilities to set the control software for simulation instead of real I/O.

Easy to learn and easy to use, here's a quick look at the steps:

A. Installation of VPLink software

B. Exporting the I/O database to create the VPLink response model

C. Executing the set_for_sim utility software to create your "simulation personality"

D. Executing VPLink with your Plantscape system

A. Overview and System Architecture

VPLink can run on the Plantscape Server, communicating with the Plantscape API via TCP/IP localhost connection. Alternatively, it can be run anywhere on a TCP/IP network that includes the Plantscape Server. The choice of location will depend on the availability of hardware or the Server loading.

VPLink can be used to simulate all real I/O connections. This method of simulation maintains the integrity of the application as none of the application code is changed. The application code continues to run as if real I/O resides within the system but the I/O data, process variables, are provided by VPLink .

Once the tags are imported into VPLink, they can be configured to interact and provide the desired feedback by utilizing VP response modeling blocks. For example: Lag, DeadTime, Accumulator, FlipFlop, Tracking, HeatExchanger, and a full function calculator language.

VPLink executes with the CEE_NT Honeywell Controller Emulator exactly as for the actual offline system. So, whether you are developing code within your laptop, or participating in Acceptance Testing on the staging floor, VPLink can meet your needs for process simulation.

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