PI on a Mini-PC

Remote Data Collection with Intelligence

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PI on a Mini-PC

- *Two examples of field-based PI Systems*
  - *The PC-104 for flight tracking*
  - *The mini-PC for field monitoring*
- *Improving your data collection*
  - *The PI advantage*
  - *Typical Applications*
- *Implementation details*

Remote Data Collection Examples

"PI-in-the-sky"

- *PI installed on a PC-104*
- *Collecting in-flight data from airplane network*

"PI-in-a-box"

- *PI installed on a book-size mini-PC*
- *Collecting power consumption data from OSIsoft headquarters*

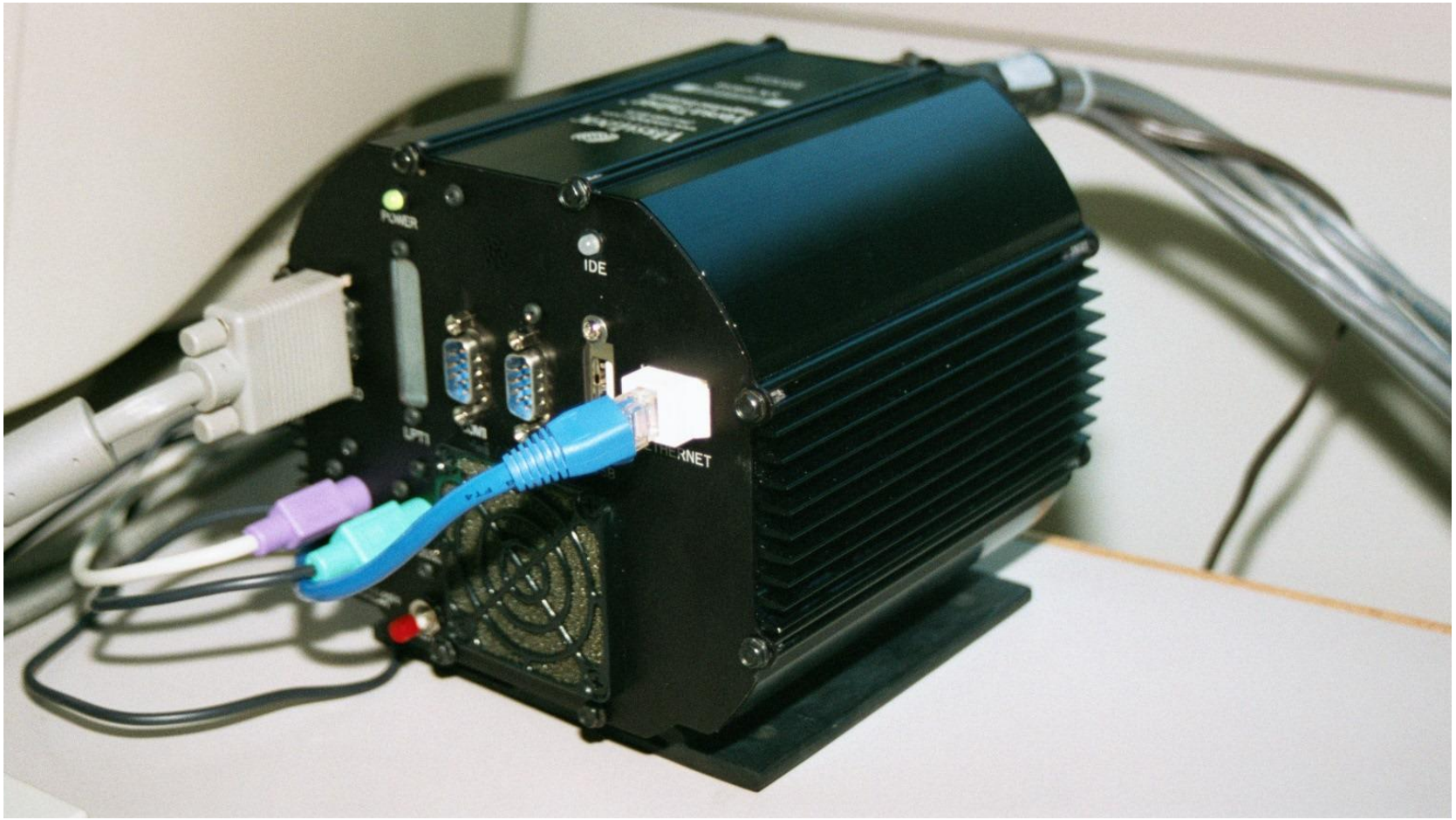
Example 1: "PI-in-the-sky"

Tracking the OSIsoft corporate plane

- *PI installed on a portable PC-104 computer*
- *Data collected from on-board network*
- *Aircell transfer of real-time data to ground*
- *Collection into "rhubarb" at OSIsoft*
- *Replication to Industrial Evolution*

➢ *Real-time view of flight data from any PC*

PI on a PC-104



PI on a PC-104

Example 1: “PI-in-the-sky”

Communication to Host

- *Autodialer to ISP over Aircell*
  - *Access to phone 2 minutes each 10 min*
  - *Disconnect on inbound call*
  - *Disconnect on outbound call*
- *VPN connection to San Leandro server*
- *PI to PI synchronization*

Example 1: "PI-in-the-sky"

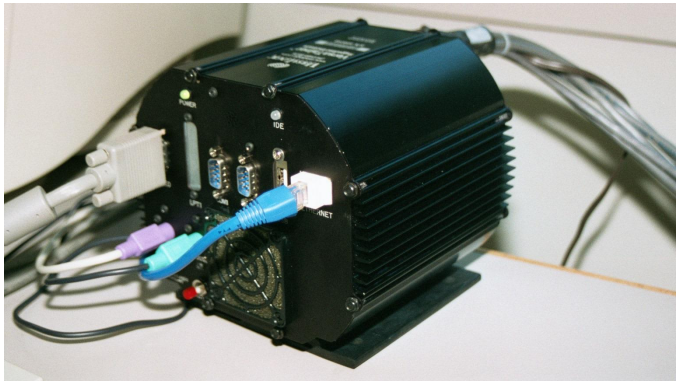
On-board Clients:

- *ProcessBook*
- *DataLink*
- *Connection via vnc and/or pcAnywhere*

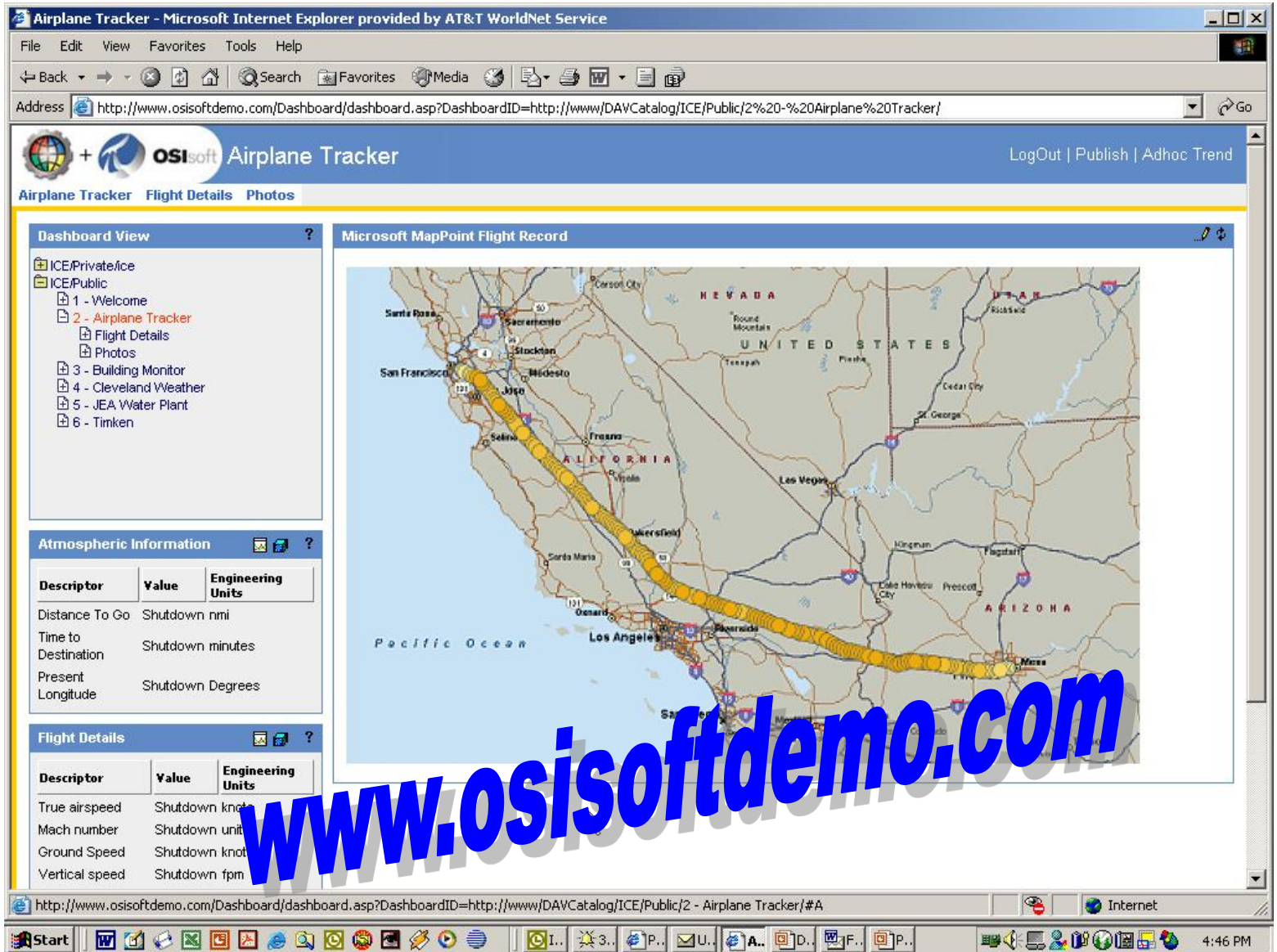
Example 1: “PI-in-the-sky”

PC-104 Specs:

- *700 MHz CPU, ethernet, video, mouse, key*
- *256 Mbyte RAM*
- *4 Channel Serial Board*
- *2 Channel ARINC Board*
- *Internal UPS Board*
- *Internal Temp, Static & Dynamic Pressure*



Tracking the OSIsoft Corporate Plane



Example 2: "PI-in-a-box"

Tracking Power Consumption at OSIsoft HQ

- *PI installed on a book-size mini-PC*
- *Data collected directly from the power meter*
- *Network transfer of real-time data to "rhubarb" server*
- *Replication of power & related data to Industrial Evolution*

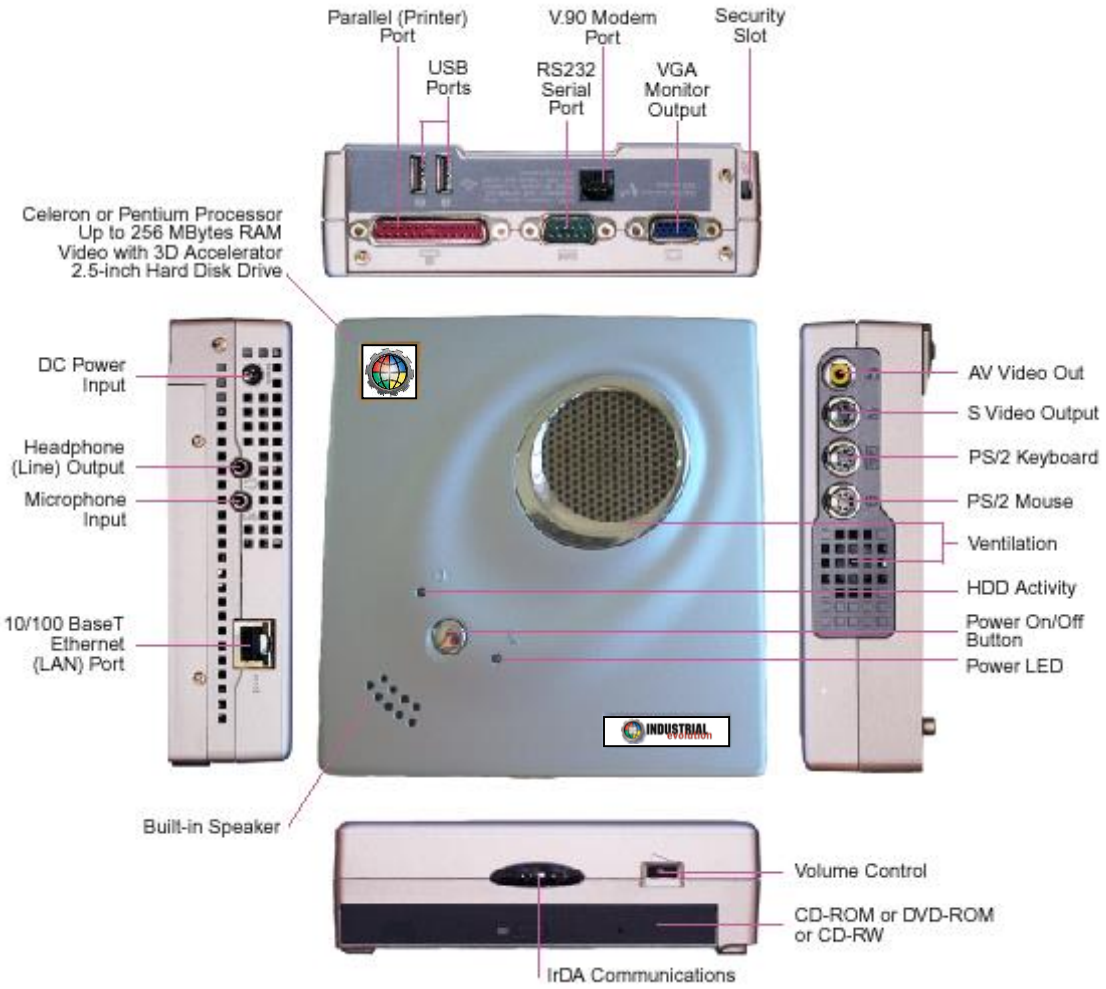
➢ *Real-time view of San Leandro office power consumption from any PC*

Example 2: "PI-in-a-box"

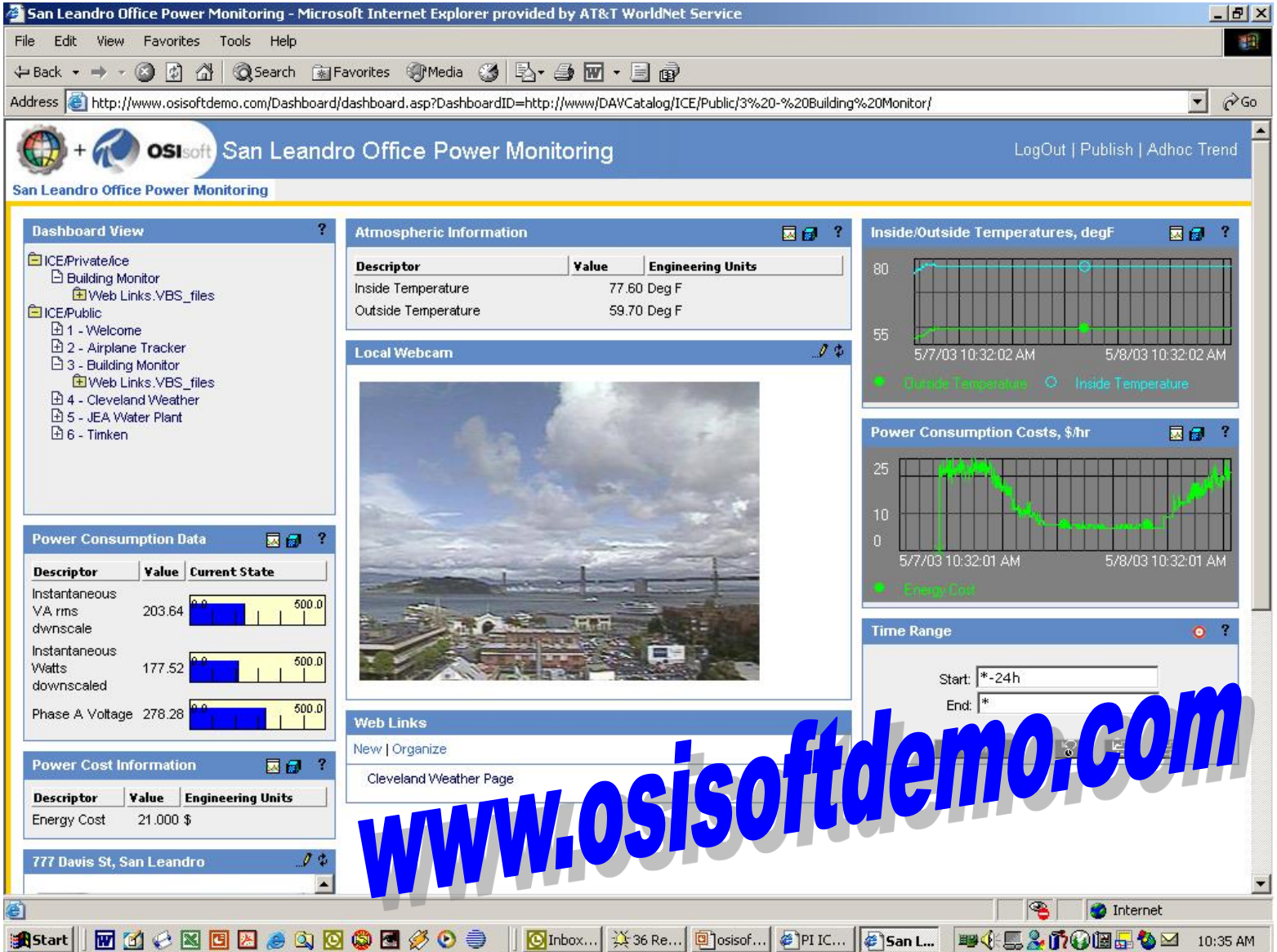
- *PI installed on a mini-PC*
  - *P3 733 CPU*
  - *20GB*
  - *128 MB*

- *No client software*
- *No keyboard, mouse or screen*

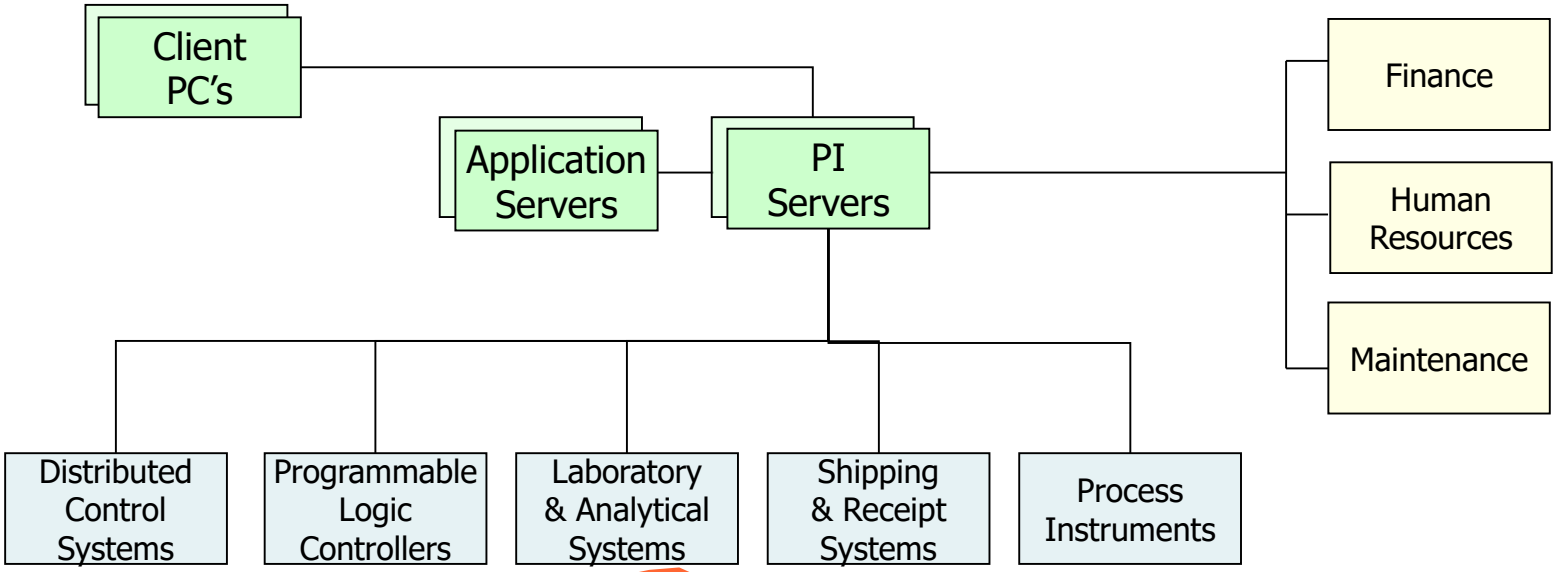
Example 2: "PI-in-a-box"

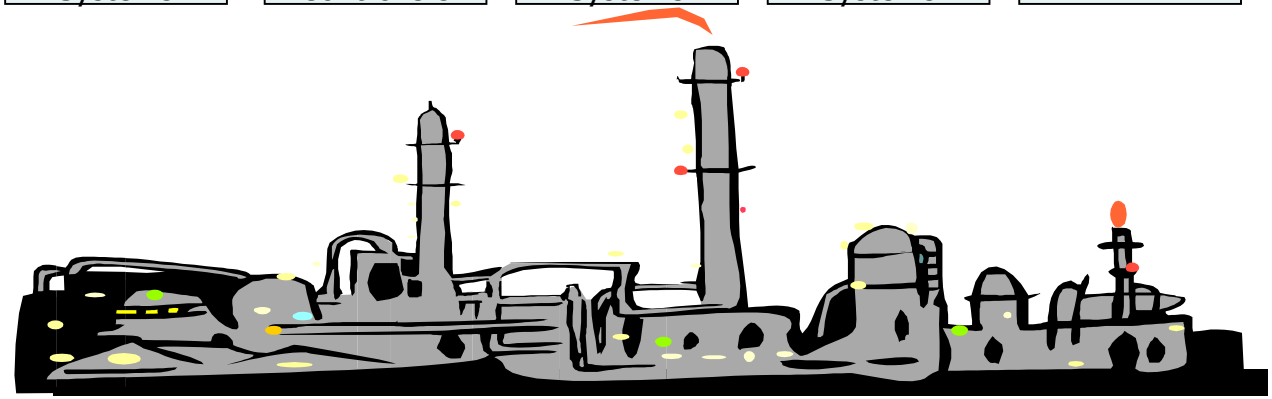


Monitoring OSIsoft Power Use

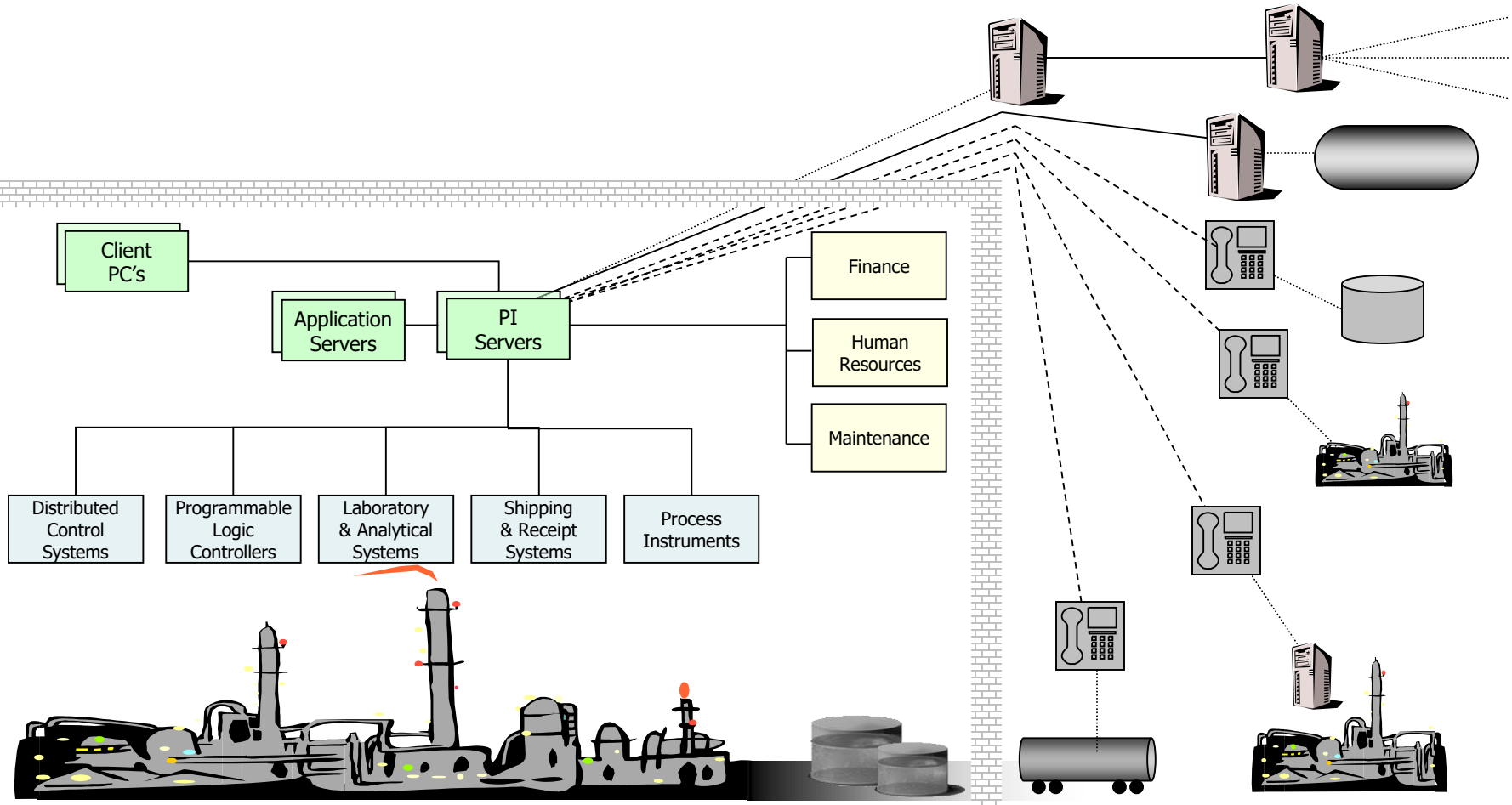


Data Collection Today





Data Collection Today



The PI Advantage for Data Collection

- *350+ device & system interfaces*
- *Unlimited data buffering & storage*
- *Proven & robust software product*

➢ *What if you could bring in these signals as a single PI-to-PI data stream?*

➢ *This is so much better than custom programs with multiple links to bring in "outside" signals*

The AnyWhere Gateway

- *Typical deployment:*
  - *P3 733 CPU*
  - *10GB*
  - *128 MB*
  - *No screen*
  - *No keyboard*
  - *No mouse*
  - *Network communications*
- *Weight and Size:*
  - *950g / 2lbs, 2oz*
  - *157mm x146mm x 45mm. / 6” x 5-3/4” x 1-3/4”*

The AnyWhere Gateway

- *Data Input:*
  - *USB*
  - *Firewire*
  - *RJ-45*
  - *RS-232*
  - *LPT*
- *Software Used:*
  - *Win2K*
  - *PI UDS*
  - *PI-to-PI*
  - *PI Interfaces*

- *Sold as a monthly service subscription*
  - *Full support & 24/7 monitoring by Industrial Evolution*

AnyWhere Gateway Applications

- *Environmental station monitoring*
  - *Pick up unlimited data from remote environmental monitoring stations*
- *Advantages*
  - *Proven PI-to-PI transfer*
  - *Use OSIsoft product interfaces*
  - *Network or ISP-based communications*
- *Benefits*
  - *Seamless fit with your PI System*
  - *Unlimited data collection, buffering & transfer*
  - *No per-call data retrieval charge*
  - *24/7 support & monitoring*

AnyWhere Gateway Applications

- *Remote processing facility / Satellite plants*
  - *Centralize unlimited amounts of processing data from remote plants in real-time*
- *Advantages*
  - *Proven PI-to-PI transfer*
  - *Use OSIsoft product interfaces*
  - *Network or ISP-based communications*
- *Benefits*
  - *Seamless fit with your PI System*
  - *Unlimited data collection, buffering & transfer*
  - *No per-call data retrieval charge*
  - *24/7 support & monitoring*

AnyWhere Gateway Applications

- *Inventory locations / Customer operations*
  - *Manage remote inventories, or even follow product use at your customer sites*
- *Advantages*
  - *Proven PI-to-PI transfer*
  - *Use OSIsoft product interfaces*
  - *Network or ISP-based communications*
- *Benefits*
  - *Seamless fit with your PI System*
  - *Unlimited data collection, buffering & transfer*
  - *No per-call data retrieval charge*
  - *24/7 support & monitoring*

AnyWhere Gateway Applications

- *Loading docks / Shipping yards / Terminals*
  - *Combine all storage, shipping & receipt measurements from all field depots / locations*
- *Advantages*
  - *Proven PI-to-PI transfer*
  - *Use OSIsoft product interfaces*
  - *Network or ISP-based communications*
- *Benefits*
  - *Seamless fit with your PI System*
  - *Unlimited data collection, buffering & transfer*
  - *No per-call data retrieval charge*
  - *24/7 support & monitoring*

AnyWhere Gateway Applications

- *Four “internal” applications:*
  - *Environmental station monitoring*
  - *Remote processing facility / Satellite plants*
  - *Inventory locations / Customer operations*
  - *Loading docks / Shipping yards / Terminals*

- *Many other applications possible…*
- *Deploy anywhere you might think to put a PI System or a API node*

AnyWhere Gateway Applications

- *Equipment monitoring / Warranty support*
  - *Share performance data from operating equipment with the equipment manufacturer; obtain "real-time" warranty support*
- *Advantages*
  - *Proven PI-to-PI transfer*
  - *Use OSIsoft product interfaces*
  - *Network or ISP-based communications*
- *Benefits*
  - *No pre-requisite plant systems*
  - *No impact on existing systems or added IT work*
  - *Unlimited data sharing*
  - *Secure viewing of data limited to intended users only*

AnyWhere Gateway Applications

- *"Application-in-a-box" service*
  - *Have application vendors maintain & support on-site applications and deliver their value as a service to your site*
- *Advantages*
  - *Proven PI-to-PI transfer*
  - *Use OSIsoft product interfaces*
  - *Network or ISP-based communications*
- *Benefits*
  - *Application vendor responsible for results*
  - *No impact to existing systems*
  - *Remote support avoids distraction to plant staff*

AnyWhere Gateway Applications

- *Two "external" applications:*
  - *Equipment monitoring / Warranty support*
  - *"Application-in-a-box" service*

- *Many other applications possible…*
- *Deploy anywhere you want limited & secure collaboration with a partner*

Implementation Details

- *Subscription includes:*
  - *Hardware*
  - *Win2K*
  - *PI UDS*
  - *PI-to-PI*
  - *PI Interfaces*
  - *24/7 monitoring*
  - *Full support*

- *Available from Industrial Evolution*

Implementation Details

- *Upgrade opportunity*
  - *Move to full PI license at any time!*

Where can I see it in action?

- *See it on www.osisoftdemo.com*

or

- *Drive it in the Exhibit area today or the cybercafe tomorrow*