PLC or PAC? VFD or VSD?

Programmable Logic Controller (PLC) or Process Automation Controller (PAC): What's the difference? Should we even care? That's what I was wondering when I recently ran across this term.

In reading a few definitions I see there are some differences appearing, but generally the following excerpt seems to capture what a PAC is.

 A PAC is often used in industrial applications for process control, data acquisition, remote equipment monitoring, machine vision, and motion control. A PAC functions and communicates over popular network interface protocols like TCP/IP, OLE for process control (OPC) and SMTP. PACs are able to transfer data from the machines they control to other machines and components in a networked control system or to application software and databases. A PAC at the core of an automation system can integrate multiple field bus networks like RS-485, RS-232, RS-422, CAN, Ethernet, Ethernet/IP, and others.

Does this sound like a description of a modern PLC to anyone but me? PLC's have migrated into becoming automation controllers without many of us realizing it. Integration of motion, communications, the use of open standards, process control and discrete logic capabilities and good data handling abilities is what controls engineers have always wanted. In the good ole days we had to spend considerable time getting things to work together.

Now the PLC manufactures/suppliers are also the automation manufacturers/suppliers. They have moved to increasingly integrate their own controls and even allow 3rd party controls to be integrated in to their PLC/PAC products. Some have even integrated an HMI into their PLC programming environment.

So the big question is, "do we call it a PAC or continue to call it a PLC"? I'd say it depends on who you are talking to? For the sake of conversation with most clients, it is easier to continue to refer to the Automation Controller as the PLC. If you do, everyone will generally understand what you are talking about. Additionally everyone is comfortable with PLC's. Calling it a PAC will often require additional explanation and might make clients a bit nervous if they expected a PLC. On the other hand if the client prefers calling it something other then the PLC who are we not to adopt the clients preference?

It looks like the PLC vss PAC naming decision is like the VFD vss VSD decision. Most controls engineers know that most VFD's are usually not run as true VFD's (Variable Frequency Drives) as the drive control algorithms have become more sophisticated and more varied, and we really should just refer to them as VSD's (Variable Speed Drives). However, since the first VSD's for standard AC (induction) motors were all VFD's this naming convention has stuck, so we continue to call them VFD's.

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