Figure 1 - ARC Advisory Group- 'Industrial Ethernet Worldwide Outlook Market and Forecast Through 2009' — May/2005
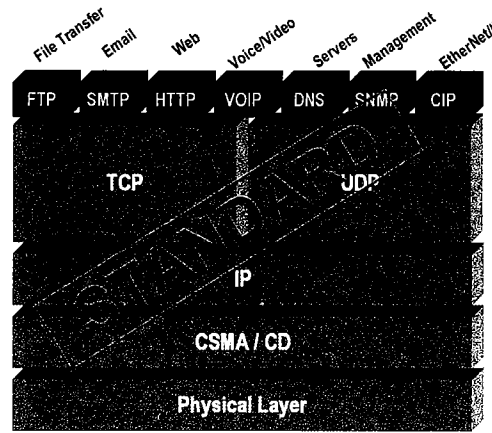

Figure 2 - Standard OSI Model shown with EtherNet/IP
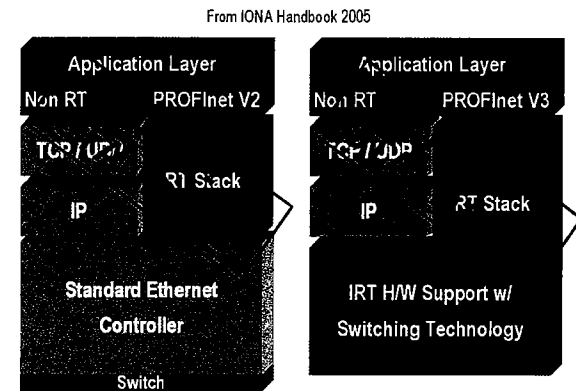

Figure 3 - PROFInet V2 & V3 protocols are Non-Standard

Claims and EtherNet/IP Responses

PROFInet Claim	Facts	EtherNet/IP Response
• Standard Ethernet is not suitable for motion control	• Standard Ethernet does work for motion control (see response) • PROFInet must use proprietary hardware to accomplish motion control	• CIP Motion and CIP Sync have been demonstrated by Rockwell Automation • ODVA has developed their specifications for this functionality in an open working group
• PROFInet is an extension and relative of Profibus	• The protocol for Profibus and PROFInet are different, further demonstrated by the need for proxy devices with routing tables on the PROFInet network.	• DeviceNet, ControlNet and EtherNet/IP all use the Common Industrial Protocol (CIP) and provide seamless bridging and routing (no routing tables required).
• Embedding switch technology into control products is good	• Some configurations will be cheaper and wiring will be simpler • 1 node failure could take entire system down in daisy-chain configuration	• Ethernet technology is constantly improving in performance, capacity and cost • Standard, off-the-shelf switch technology allows customers to stay current with Ethernet technologies independent of control hardware
• 20 million Profibus nodes shipped versus only 3 million ODVA nodes shipped	• Profibus lumps all network devices ever made by Siemens (and Interbus-S) into the 20 million number • If Rockwell Automation included all network devices ever developed (i.e. Universal Remote I/O, Data Highway Plus, etc.) the numbers would be equal or better • In 2004, Rockwell Automation shipped almost 13 times as many EtherNet/IP nodes	• The ODVA number announced was for DeviceNet nodes only (and, in our opinion, was grossly understated!) • All Profibus networks do not share a common protocol and thus should not be grouped together in their numbers