

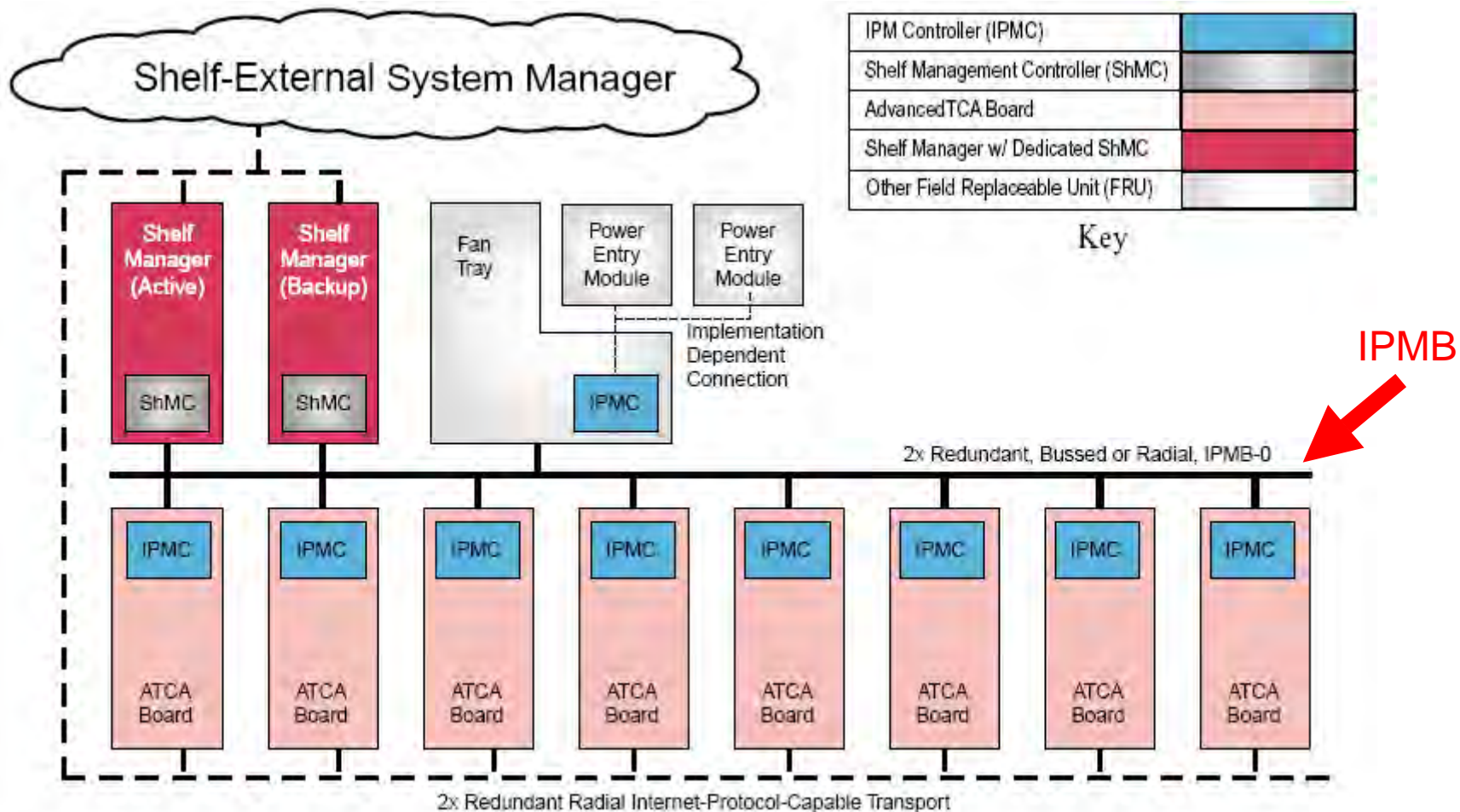
# Physics and ATCA

***Advanced TCA™***

Advanced Telecommunications Computing Architecture  
- developed by PICMG

# The Good

- ❑ As Physics Projects increase in complexity, the subcomponents of the Projects need to increase in terms of reliability and availability.
- ❑ ATCA was developed as with the intent of ensuring VERY high reliability and availability for the Telecom Industry.
- ❑ Physics may be able to leverage off the technology developed for Telecom by means of using



Copyright 2003, PCI Industrial Computers Manufacturers Group (PICMG)

# The Bad

- ❑ The PICMG 3.0 Revision 2.0 AdvancedTCA Base Specification defines ATCA mechanical / electrical / software constraints
- ❑ Communication between Shelf Manager and FRUs (including blades, which contain the interesting Physics Hardware) Is through the IPMB – Intelligent Platform Management Bus.
- ❑ Chapter on Shelf Management (how to use the IPMB) is 154 pages (~30% of the Spec.) Ouch!

# Blade

( Full of good Physics Hardware )



Shelf

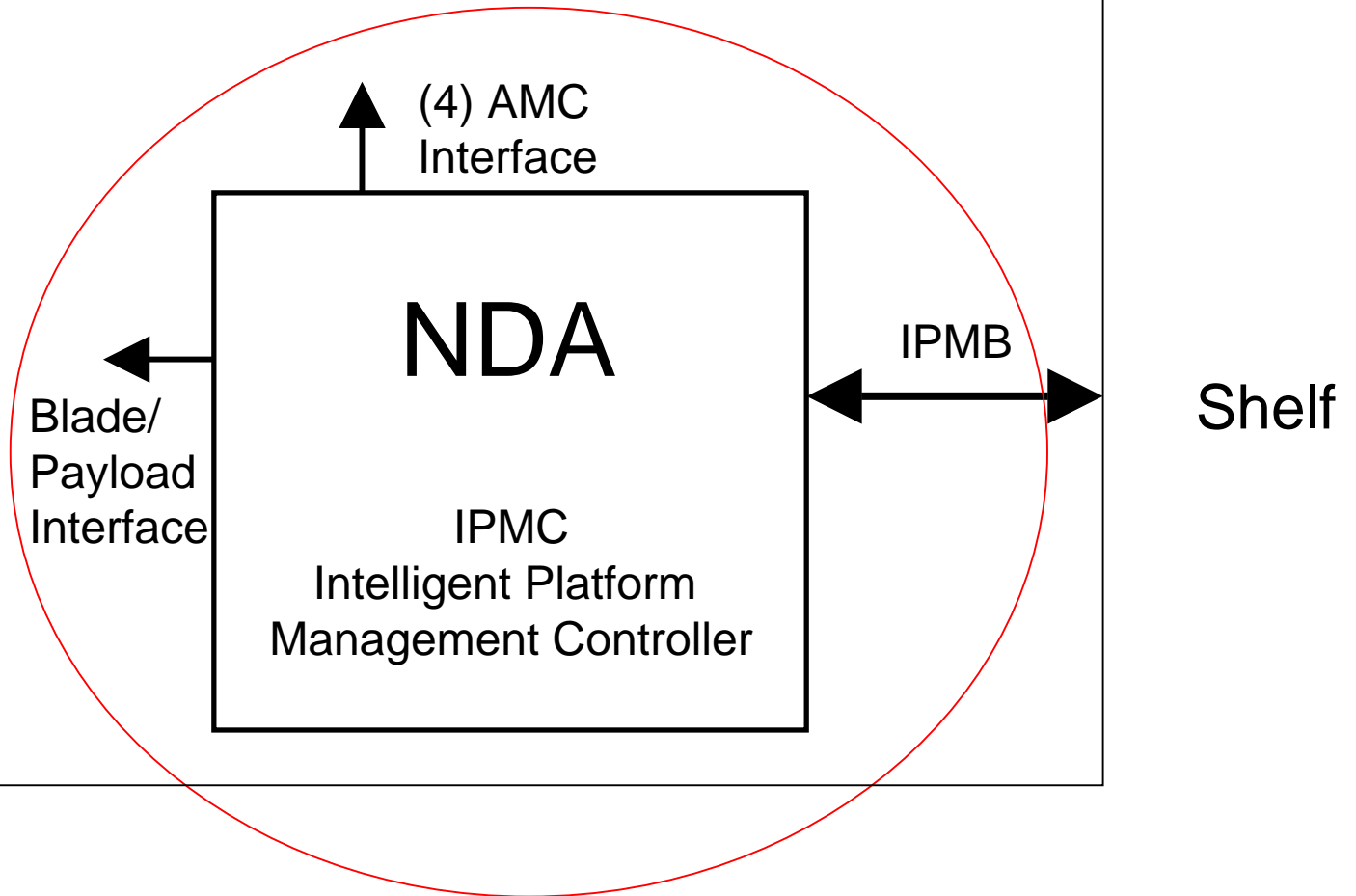
# The Ugly

- ❑ There currently is NO (known) in-house developed Physics solution to implementing a fully compliant IPMC
  - ❑ There are incomplete solutions
  - ❑ There are in-progress studies at Illinois (Perry, Yehan, Kasten)
  
- ❑ ( \$\$\$ ) Pigeon Point Systems, a software company, has a \$10K threshold to use their development tools.
  
- ❑ ( Proprietary ) Vadatech, a hardware company, requires an NDA and maintains proprietary control over its 'free' IPMC solution.

# Blade

( Full of good Physics Hardware )

Vadatech



# The Solution ???

- ❑ Does Physics want their own solution to implementing an IPMC?
- ❑ Will a commercial solution be viable for Physics?  
(longevity, inclusivity, etc.)