



An Innovative Solution That Streamlines Broadband Services

**Overview
(with Case Studies)**

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Challenges: Broadband as the Fifth Utility



Broadband demand is increasing
Higher penetration = higher profit
But churns, support calls, truck rolls...
reduce profit and satisfaction

- Subscribers have legacy wiring. In-wall connections = Hidden Cost.
- Subscribers are not computer or data savvy. Handholding = Hidden Cost
- Different devices are connected to broadband services. Growth in mobile and web applications. No common denominator. Frequent technology changes. Complexity = Hidden Costs.
- Rising call-center's labor rate. Complexity increases cost of staff training
- Truck roll is expensive. E.g.: One ATT U-Verse customer has 10 truck rolls
- Long holds on phones, frequent case-escalation increase costs and frustration.



Essence of the Avinta Innovation



Allow Broadband Service Provider to Diagnose Faults like Old-fashion Analog Voice Lines

- Pick up the phone to hear dial tone
- Call someone and ask that person to call back
- If this works from the NID box outside the building, customer knows that abnormality is on-premises. The service provider understands its responsibility with the subscriber ends at the demarcation point outside. Unnecessary support costs, and most importantly, disagreements and frustration are avoided.

Avinta reinvents the same simplicity in diagnostic process for broadband services. Enable Service Provider to successfully scale service to 100% penetration



Advantages of the Avinta Solution



- Service provider installs only once. Users install well-identified end points wherever appliances or devices connect to service
- Isolate faults like the POTS and leverage the large pool of technicians trained on POTS.
- Eliminate issues concerning hidden connections through walls
- Reachability at each corner of the house is 100% validated. Important for Smart Grid, Smart Home, Home Care, etc.
- Agnostic to transmission technologies, xDSL, WiFi, Coax, WiMax, etc.
- Phase by phase implement Avinta IPs, starting from standards-based volume merchant ICs, then FPGA & finally SOC



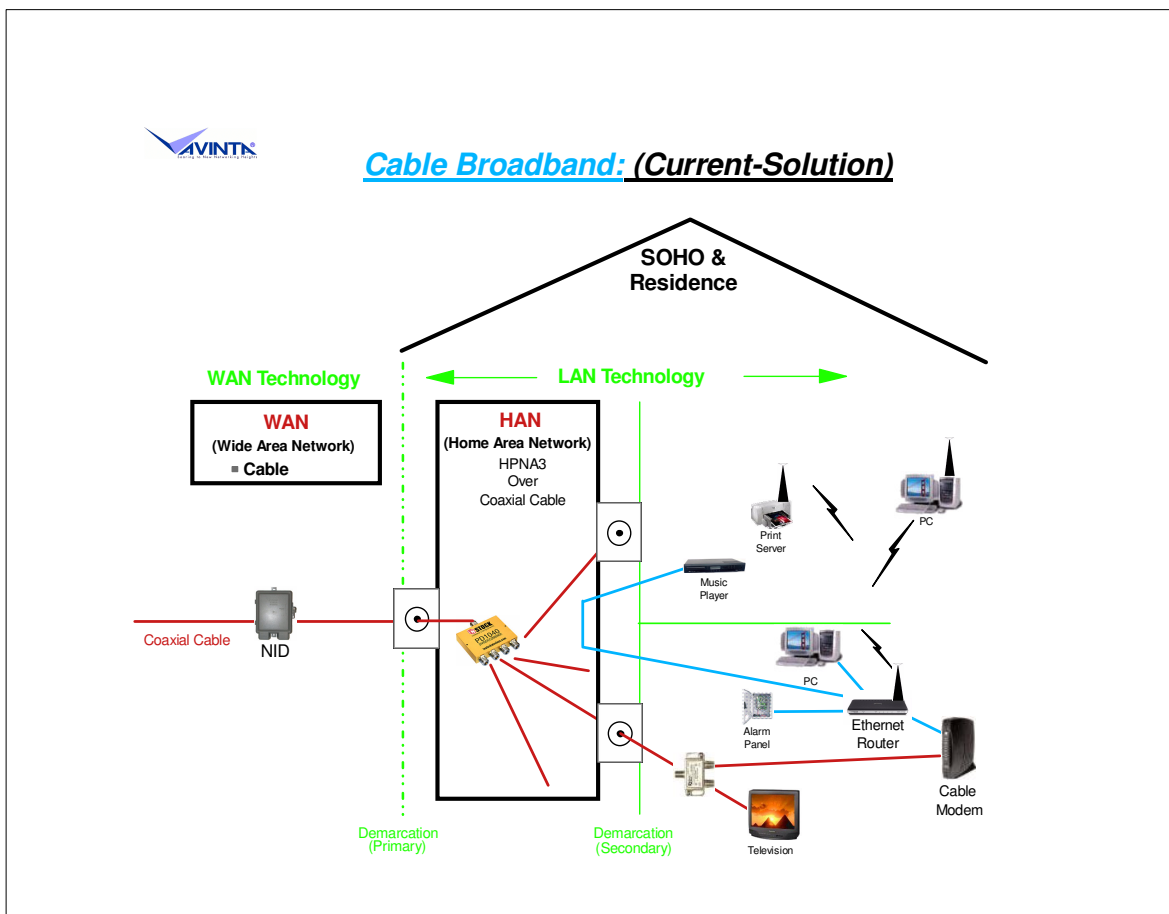
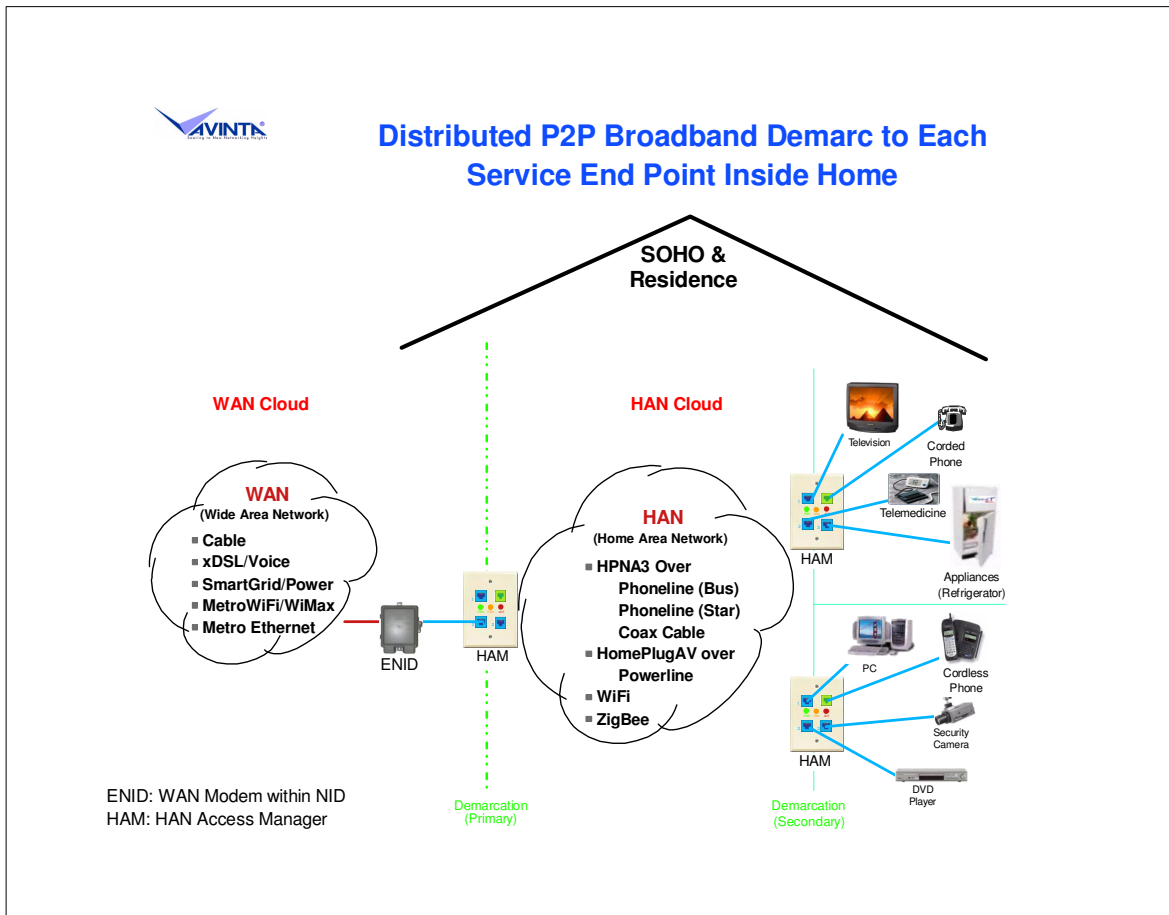
Benefit Users, Providers, Manufacturers

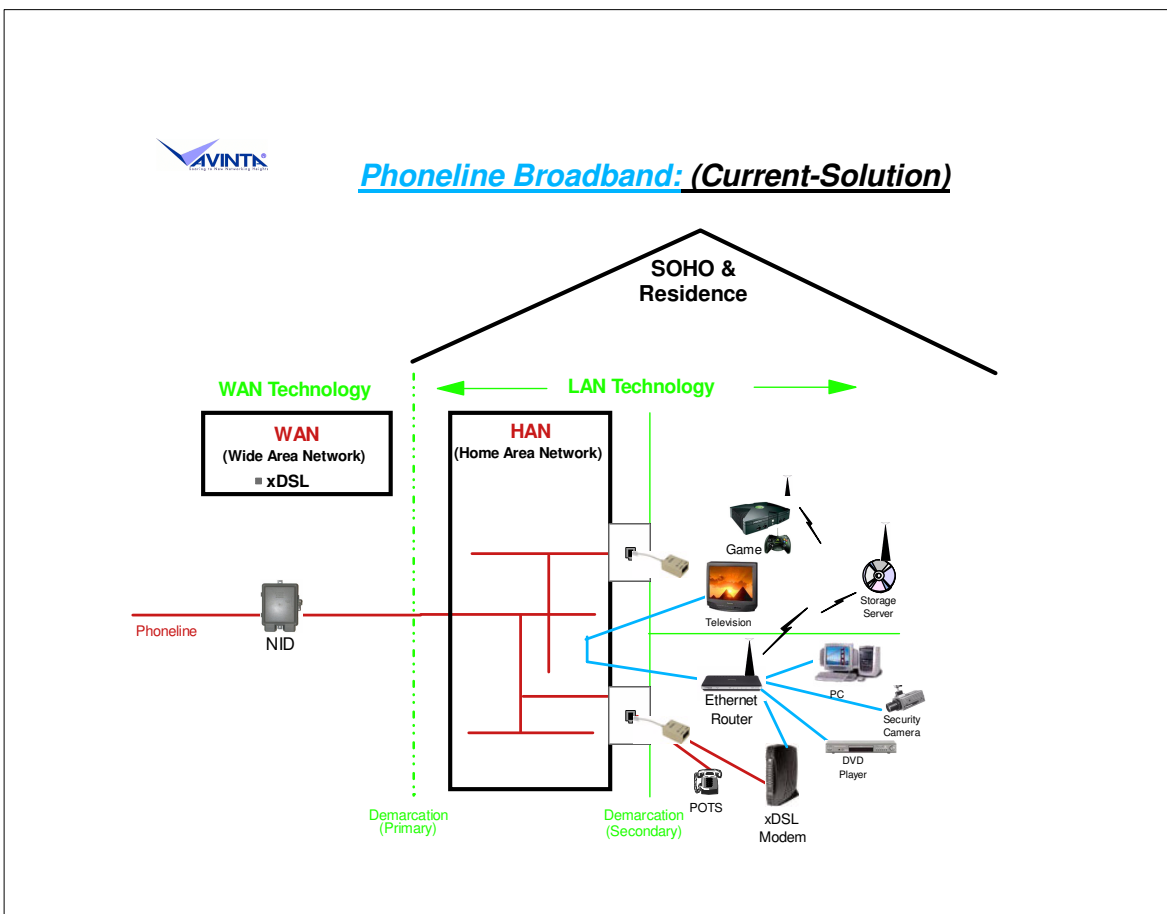
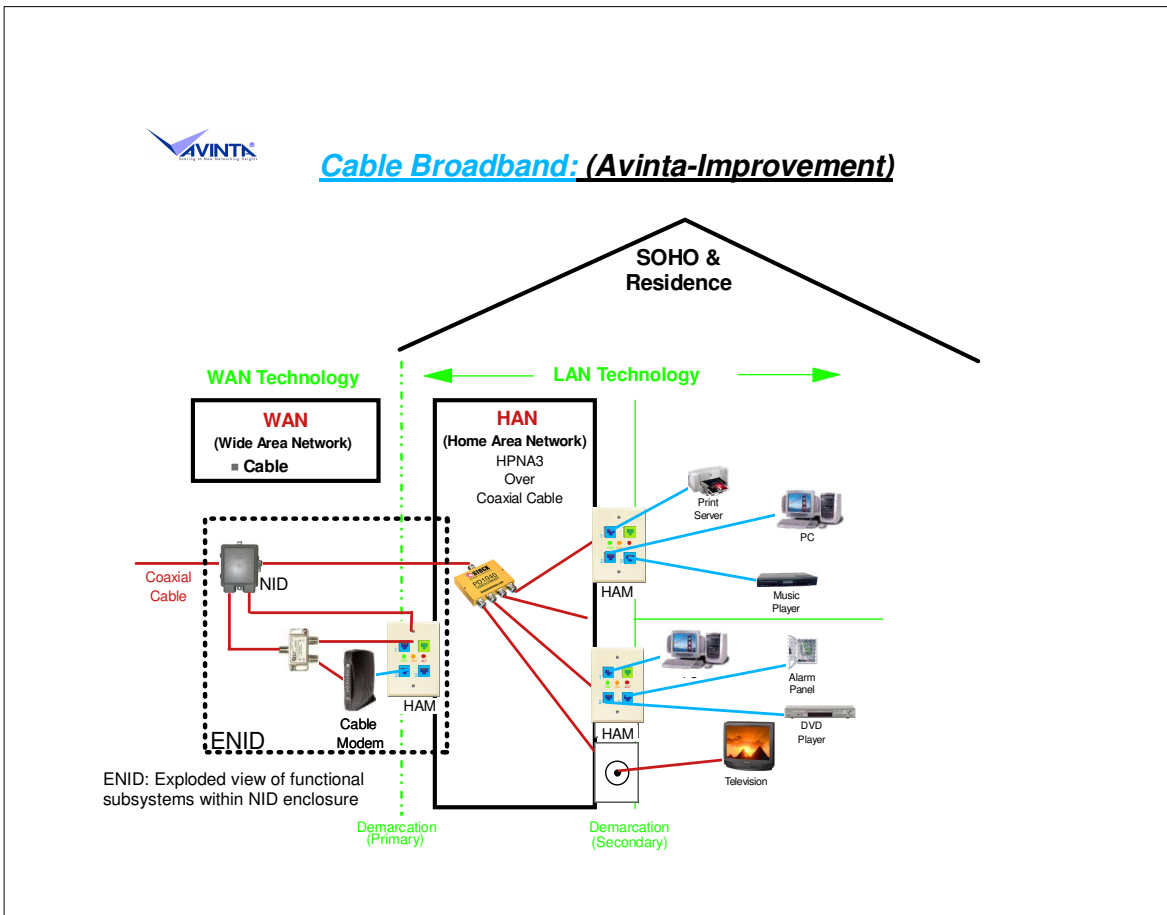
- For Users
 - Self-manage (install, monitor & maintain) their own networks
 - Improve user experience and satisfaction
 - Consistent and distributed configuration
 - Unify home network characteristics
 - No ugly exposed data cables between rooms
- For Broadband Service and Content Providers
 - Enable wide broadband deployment everywhere
 - Reduce or eliminate calls to call center
 - Lower skill barrier to support broadband
 - Eliminate truck rolls
 - More upgrades to higher-speed services
 - More content and applications consumption
- For Equipment and Device Manufacturers
 - More subscribers = More products deployed
 - More contents and apps. = More product upgrades



Simple Field Implementation

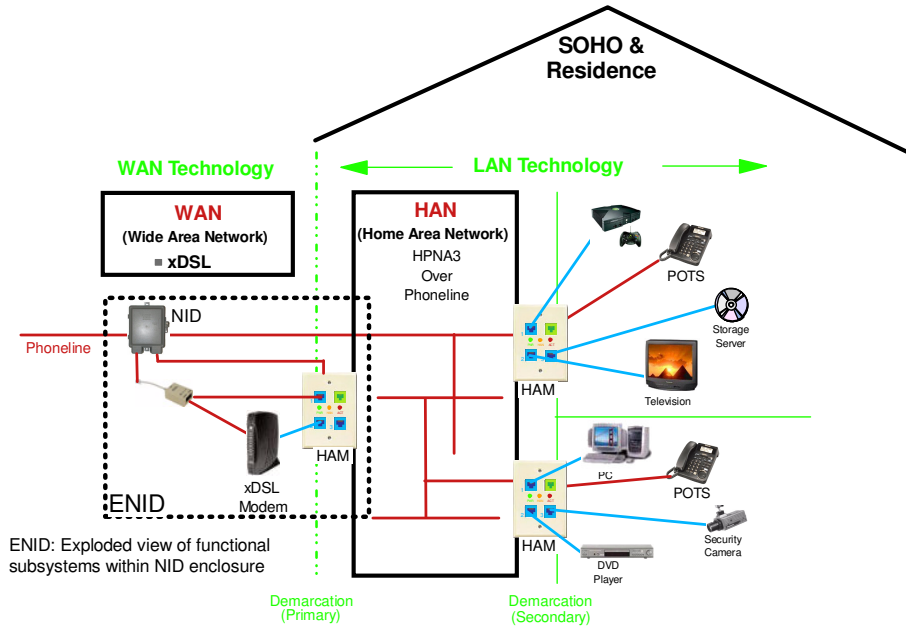
- ENID installation by carrier's installer
- User plugs in HAM wherever broadband is needed
- All end-user devices access via Ethernet interface
- Use wireless only when mobility is desired



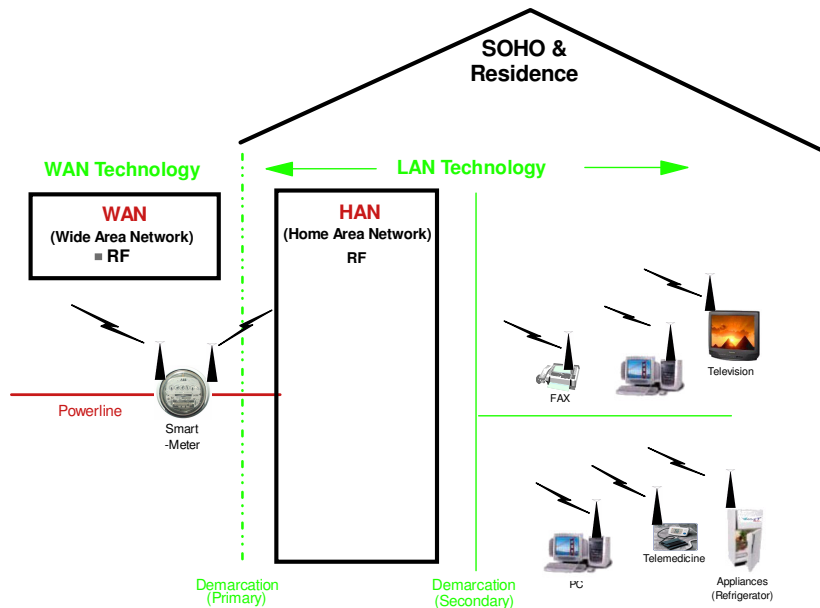




Phoneline Broadband: (Avinta-Improvement)



Powerline Broadband: (Current-Solution)





Powerline Broadband: (Avinta-Improvement)

