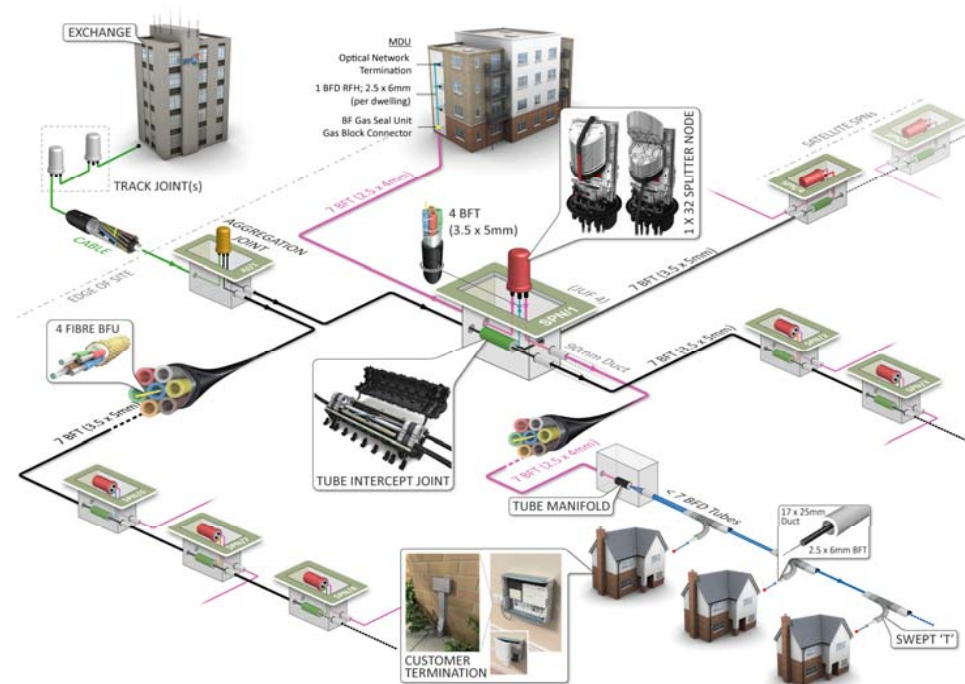


# Commercial Drivers

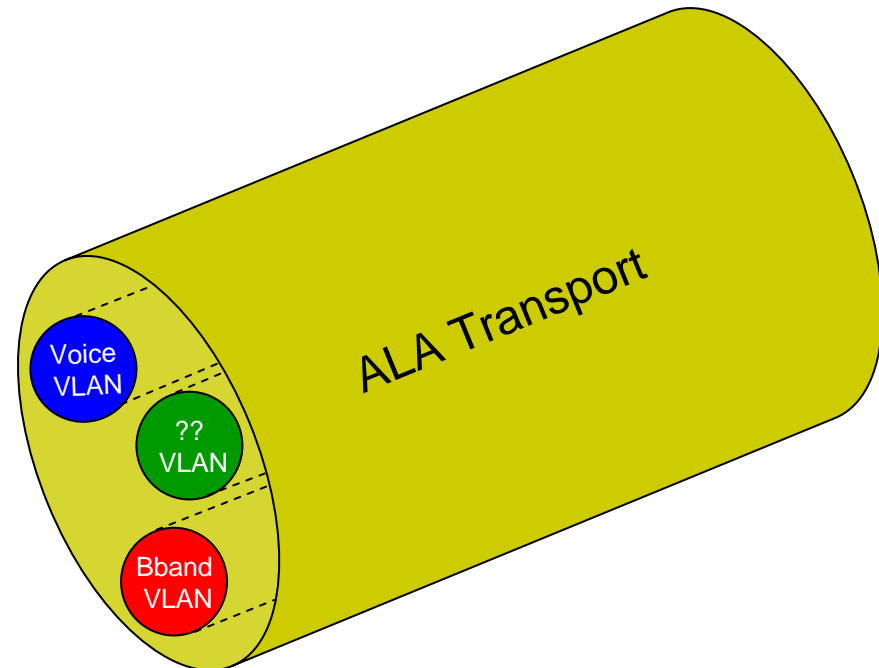
- NGA key to growth in our industry
- Fibre To The Premises means (possibly) no copper presence
- What happens to voice?



Source : Openreach

# Commercial Drivers

- Voice becomes just another application on a QoS-enabled ethernet network
- Traditional voice becomes VoIP, seamlessly to end user
- ATA at customer's site transforms analogue voice to VoIP
- The ATA could be standalone, or embedded into the ONT



# Commercial Drivers

But that creates an issue. For copper access, there are two regulated products, WLR and MPF (LLU). Which approach should NGA-T mimic?

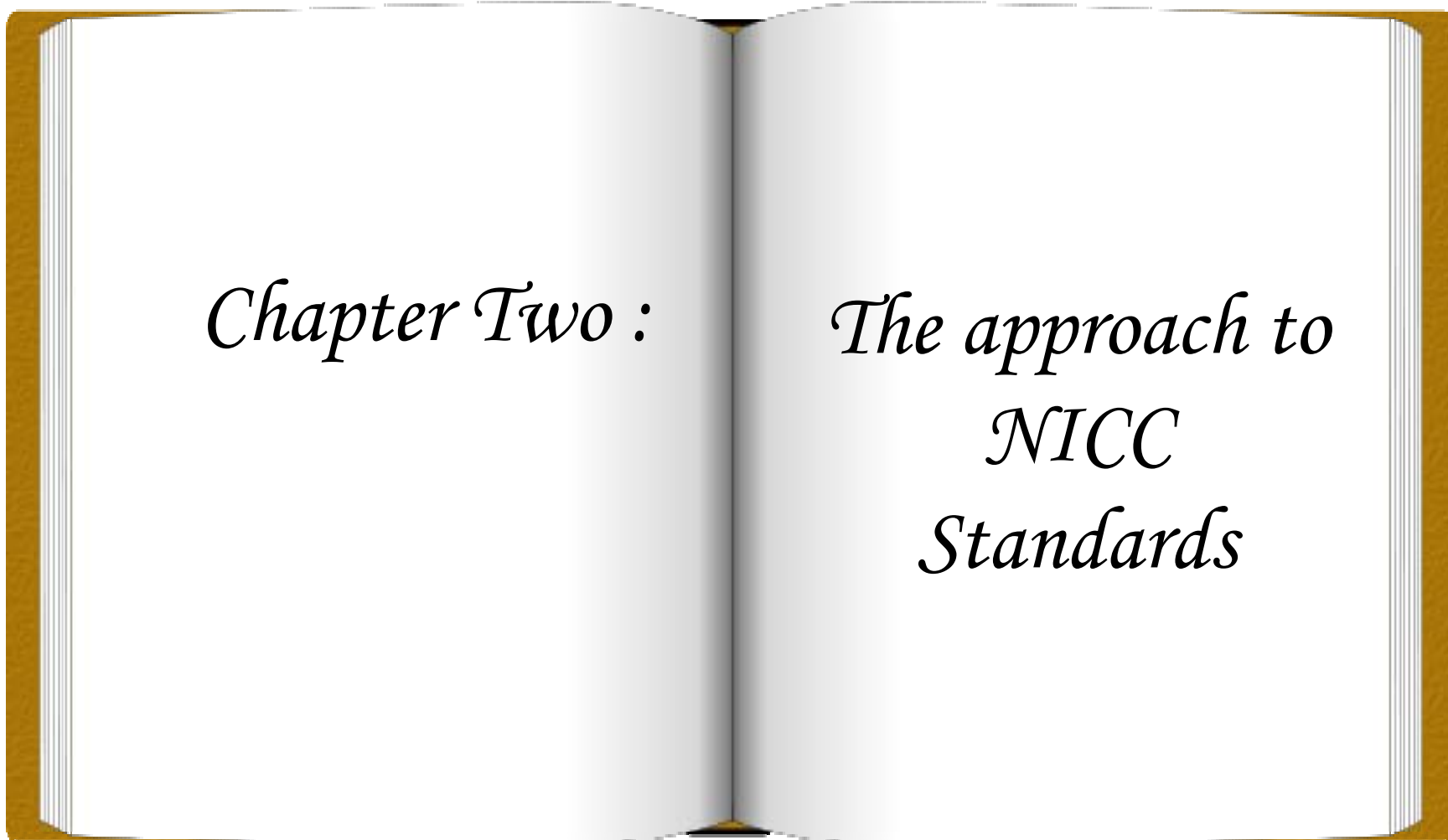
WLR-like :  
Managed voice  
service with  
Openreach  
providing  
dialtone



MPF-like :  
Access network  
just sends  
VLAN to  
telephony  
provider

# Commercial Drivers

- Either way would need technical standards
  - WLR-like : to allow interop of access network's callserver & ATA
  - LLU-like : to allow interop of telephony provider's callserver with access network's ATA
- Ultimately, LLU-like approach adopted
  - Openreach service : Fibre Voice Access
  - But nothing to stop CPs using FVA to provide a more managed downstream service



# The approach to NICC

- We'd like technical standards to allow callservers and ATAs to interwork
- The ATA could be built into the access network's ONT, or it could be standalone
- If standalone it could be supplied by the telephony provider, or bought from Argos(\*)
- We want to allow all the current PSTN features to remain
- We need to be able to configure, test and manage the service
- We understand this hasn't really been done anywhere else
- Actually industry needs the standards right now. I know we should have asked earlier but...

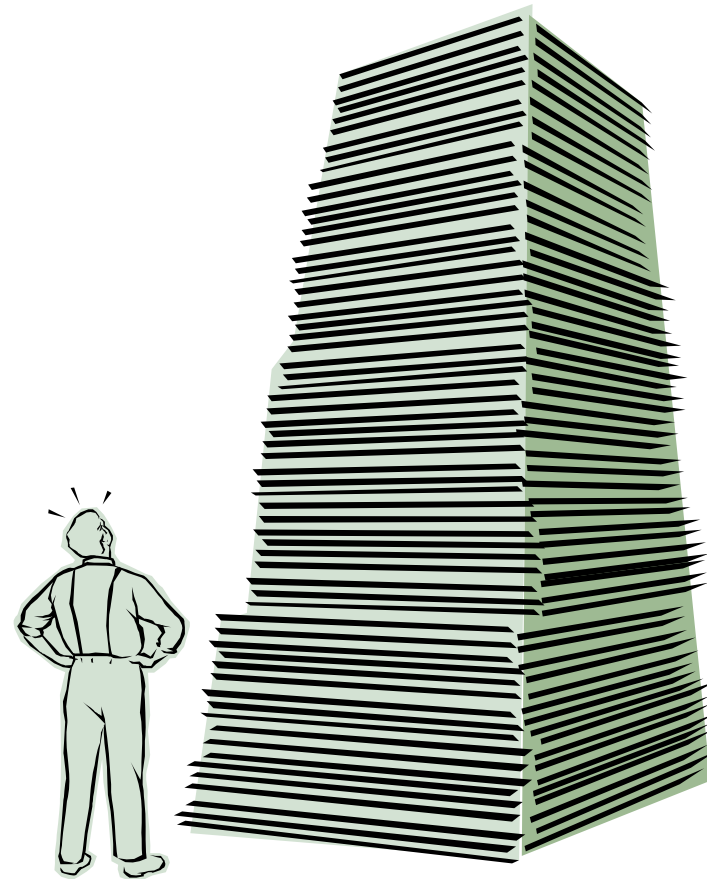


(\*) other retailers are available!



# The approach to NICC

- In late 2009 we committed to give this activity a high priority
- Initially thought Q2 2010 a realistic (stretch) goal
- But it was more complicated than we thought
- We over-committed...



*Chapter Three :*

*Identifying  
what standards  
were needed*

# Identifying the standards needed

- Architecture & Requirements
  - ND1645
  - Includes security
- Protocol specification
  - ND1033
- Management specification
  - ND1646
- Test specification
  - ND1416

A&R Working Group  
*Ian Spiers*

Security Working Group  
*Jim Credland*

Protocol Working Group  
*Jim Walmsley*

Management Working Group  
*Jonathan Welton*

Testing Working Group  
*Nick Ireland*

NGA-T Co-ord group

*Chapter Four :*

*The religious  
wars*

# The religious wars

- Should the approach to the protocol tightly or loosely couple the ATA and callserver?
- Solved by sidestepping the all encompassing approach and looking at operation of particular features



# The religious wars

- Should the model support 2 x telephony providers on a single ALA access
- General acceptance that desirable, but not if it introduces extra complexity...e.g. no IP routeing
- Model allows for this by using 2xATAs on separate VLANs



# The religious wars

- How to support 3 way calling : autonomous platform or media mixing at the ATA?
- Agreement reached to allow either option, selectable via management interface
  - But beware the commercial ramifications!



# The religious wars

- How to support overlap signalling? Multiple Invite or INFO method?
- Default is enbloc only
- Auto-detect of overlap method considered but rejected
- Overlap method selection is via management interface

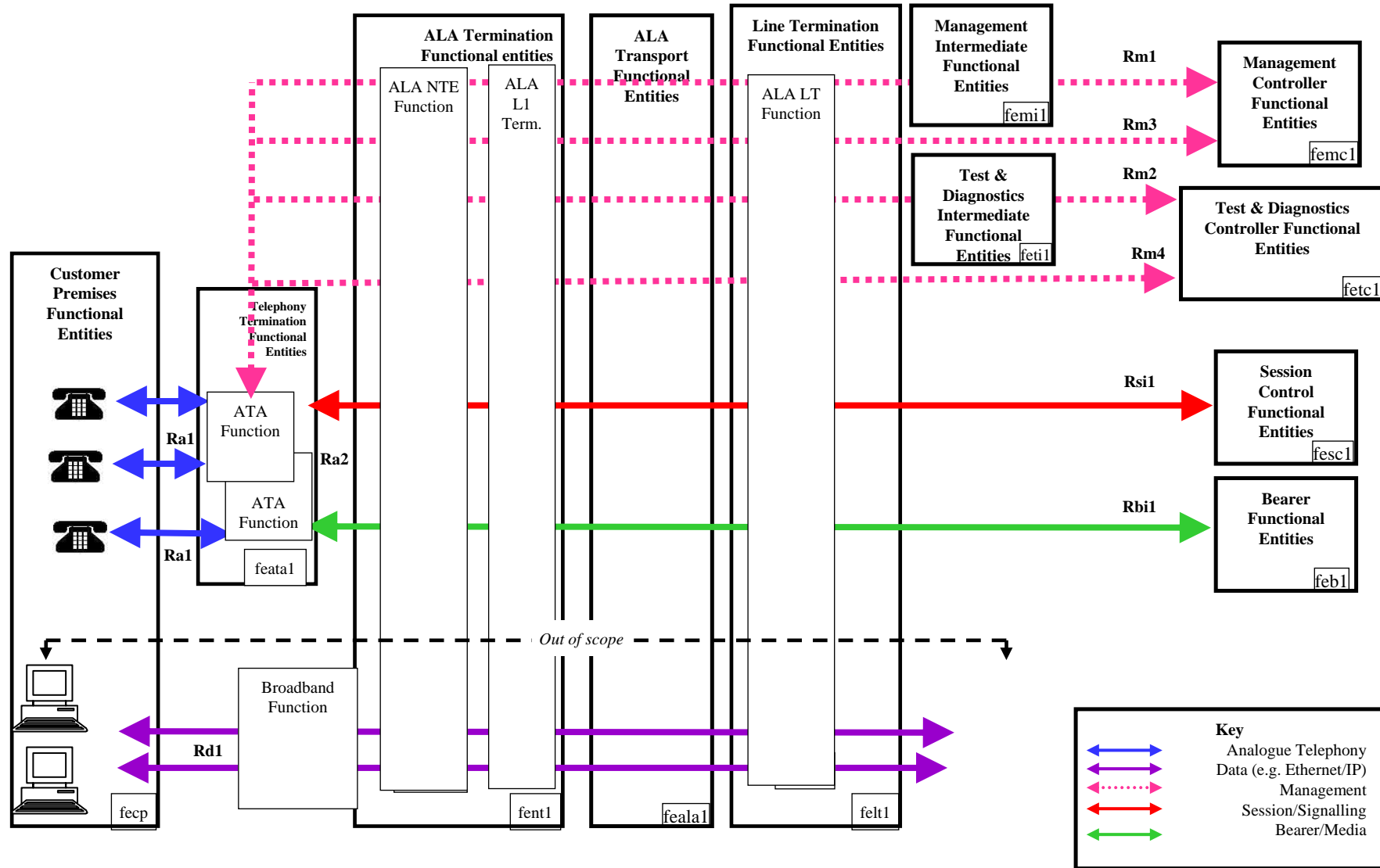




*Chapter Five :*

*The outcomes*

# We have an architecture



# ...and a management spec

- Covers
  - L2C / Provide
  - T2R / Assure
- Sets out parameters that need to be exchanged between NGA-T telephony provider and NGA-T access provider

# ...and a test spec making good progress

# ...and the protocol is progressing

- Basic call draft complete
- Publication of basic call spec by year-end
- Full spec filling in gaps early 2011

*Chapter Six:*

*The moral of the  
story*

# Lessons to be learned

- Industry : please approach NICC at earliest opportunity with fully scoped requirements
- NICC : don't over-commit
- NICC : where no agreement, approach the subject from a different angle
- Industry : if you don't resource NICC don't expect answers...

