Peebles Valley mesh project
Use wireless mesh networking in the Peebles Valley area as a low cost first mile solution to connect people to the internet and each other.

Test if a community can take ownership of the network.
Background

ACTS Clinic

ACTS Hospice

16th October 2007

FMFI dissemination workshop
USAID

16th October 2007  FMFI dissemination workshop
The house where Agnus lives
The effect on the Clinic
Managing the bandwidth (the Godfrey factor)
Lassey's experience
But all of this is illegal!
Built a clear case for the creation of a free community network infrastructure licence.
Lessons (1)

- Mesh networks are a viable solution for rural connectivity
- Sharing some free VSAT capacity amongst a large pool of users is not a long term sustainable solution – a commercial service is still needed eventually.
- Tight bandwidth management is essential to fairly distribute bandwidth amongst users in a mesh.
- Bandwidth limitations need to be carefully explained to first time users (e.g. music downloads confume bandwidth quickly)
- First time users need to be sensitized to typical internet scams and phishing schemes
Lessons (2)

• Lightning effects ethernet connections – avoid long ethernet
• Masts with large antennas are bent and blown over by wind
• Configuration of mesh nodes still not completely deskillled
• Cost not an issue for some farmers which made the mesh network a hard sell – they use 3G/GPRS for the roaming convenience
• Commercial viability of the network difficult for entrepreneurs due to current licencing regime
• Opportunity to use this technology more important then educating people about technology.
Outcomes

• Cut the high costs of phone calls between clinic and hospice
• Networks perform well even with home-built inaccuracies
• A local computer business wants to duplicate Peebles mesh
• Average throughput rate exceeds fastest ADSL link – 64kbps
  VSAT still the bottleneck
• Mesh generated skills which in turn helped provide jobs