

Best current practice on alternative operators II:

Layering, vertical integration, wholesale-only

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BCP on Alternative operators

https://en.wikipedia.org/wiki/Best_current_practice

- A Best Current Practice (BCP):
 - A de facto level of performance in engineering and information technology
 - More flexible than a standard, since techniques and tools are continually evolving
 - Carry the endorsement (tech approval) of the Internet Engineering Steering Group (IESG) or IRSG?
- Paired to RFC 7962:
 - *Alternative Network Deployments: Taxonomy, Characterization, Technologies, and Architectures*
 - Organize, summarize, reference practices +/-



BCP on Alternative operators: “new generation” access

- Document as best current practices (BCP)
 - Alternative ... **fibre**, fixed radio, mobile operators
- Understand mechanisms and environmental factors for/against alternative networks →
 - Spontaneous, crowdsourcing, replication
- Makes sense?



Survey

- Community, Location (central),
- Financing/investment model,
- Legal representation, Infrastructure,
- Economic model, Governance, License, Stakeholders, Regulation, External Incentives, Savings over commercial model,
- Website, Coverage, Started, Scale (homes),
- Policy environment: **Universal Service Funds (USF)**, Influence of USF, USF related links

A table to collect details

	A	B	C	D	E	F	G	H	I	J	K	
1	Community	Location (central)	Financing/investment model	Governance	Legal representation	Infrastructure	Economic model	License	Stakeholders	Regulation	External Incentives	
2	B4RN	Lancashire, UK, rural	Optional community shares, voluntary work, free wayleaves, tax deduction for investment in commons, community loans, a further business development loan from the Esmeé Fairbairn Foundation	Cooperative: board + member assembly (with shares)	B4RN company, social enterprise of public interest (community benefit society with the FSA, under the Industrial and Provident Societies Act 1965)	Active fibre for every parish + backbone with two optical connections to IXPs in Manchester and Edinburgh using leased dark fibre. 1Gbps symmetric for all customers.	Initial fee (300-1500 GBP), initial investment (<100K GBP) + monthly fee (30 GBP/ 1 Gbps)	Registered as telecom provider in the UK, wayleave over private land contributed for free	Investors, landowners, volunteers, contractors, consumers, employees	Telecom operator (member of INCA.coop)	Gigabit Broadband Voucher Scheme, UK, <3K GBP for each home for installation costs)	Free private content work paris pre-three local com shar reim
3	guifi.net-goufone	Gurb, ES, rural	Private investment mainly (local owners, employees), optional crowdfunding from customers.	All infrastructure held in commons. Private operators must sign an agreement with the guifi.net Foundation before doing any economic activity.	Private company	Fibre, WiFi radiolinks, optical fibre backbone in commons (overseen by guifi.net Foundation)	Infrastructure: can be paid up-front (1500€, usually in one single payment) or rented (17€/month, indefinitely) Service: 18€/month for (typically) 1 Gbps but subject to availability and specific operators' conditions	Registered as telecom provider in ES	Consumers, employees, commons (guifi.net Foundation)	Telecom operator (registered in national regulator)	None	Sam cost than com but und
4	EC Fibre	Vermont, USA	Investors purchase tax-exempt 15 year promissory notes that effectively earn 6% interest	ECFiber is an InterLocal Contract with a Governing Board composed of a representative from each member town (of								



Gigabit/fibre networks

- Local networks: rural, urban, regional ...
- Business and governance models: commercial, cooperative, municipal, academic, governmental ...
- Network model:
 - Local/regional/global addressing, routing, redundancy, gateways (CGNAT), etc.
 - IXP like: interconnections, choice of carriers, CDN, VOIP providers, etc.
- But there is more ...

Layering


Retail services

Active network

Physical infrastructure

- Layers: (retail) electronic services, “telcos”
active network, “netcos”
physical infrastructure (dark fiber), “infracos”
- **Vertically integrated:** all layers by one provider
- **Incumbent networks:**
 - Unbundled line access, Bit-stream or VULA,
 - Wholesale access for alternative/challengers
- **Wholesale-only model:**
 - An open access network,
sells wholesale services, not retailers

Driven by
regulation



Best current practice on alternative operators

- How you can contribute?
 - Ideas for the table to content: structure
 - Contact me to collect details about BCP cases to document
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