

GCHQ Cable radioactivity chart.

Dec 5, 2014 By Paul Dietrich

I have done analysis of the published documents relating to GCHQ's bulk cable tapping and have come up with a little chart scoring the cables by “radioactivity,” in other words, how much bad GCHQ jujitsu is going on with them.

I scored one point for each of the following factors:

- A secret codename mentioned in connection with a cable
 - One additional point for “the codename is all we know”
- References to “egress”
- Connections in Bude, Porthcurno or Goonilly
- Connections to Cyprus, where there is a GCHQ [Spy base](#) associated with TEMPORA
- Connections to Oman, where there is an [additional base](#).
- The presence of an SRT, (Sensitive Relationship Team), associated with the cable.

I subtracted one point for each of the following factors:

- Its presence in the “no current access” table.
- It was low capacity cable.

The hottest cable turned out to be SeaMeWe-3, since it connects UK to both Cyprus and Oman, has multiple codenames associated with it (NUMDAH 2 and NUMDAH 3).

It is with some trepidation that I publish this chart. It comes with a long list of caveats, and is by no means to be interpreted as a list of “safe” cables.

The data covers only the GCHQ's access from the period of 2009, and forecasts to 2011, and a slide dated August of 2012 states that access to “light” has increased 7000% in the last five years. It is old data and getting older, many of the “safe” cables are likely tapped, and possibly even some of the “hot” cables are no longer so. Even in 2009 the GCHQ still had the NSA, the remaining Five Eyes and other partners to give it cables it otherwise would not have had access to. It is entirely possible that some of the MOST important cables never made even the classified version of the list, and that still-unpublished documents will change the calculus.

I chose not to include the information from the “[partner cables](#)” document. It was simply a list of which of the GCHQ's partners had access to which cables. Not necessarily that they in turn provided data to GCHQ for each of the specific cable identified. Further, this list does not include “[End Point CNE](#)” similar in nature to PFENNING ALPHA, as the data have not been published.

In addition, there are two cables of interest that do not make it to the chart: FLAG Falcon (which connects to Seeb, Oman) and NorSea Com 1 (otherwise known as Tampnet, which connects UK to Norway via 5 offshore oil platforms). I simply do not have the data on them, but they should be assumed to be monitored. The former because of the connection directly to the GCHQ's spy base, and the latter, because of the offshore platforms.

Special thanks to Henrik Moltke, for publishing the [source documents](#) and without whom this would have been impossible.

GCHQ Cable Radioactivity Chart

Codename mentioned in association	"Proposed" (As of 2009)	Access Pt?	No Good Access	SRT	Real Telco	Cable	Significant landings			SIGAD		Egress				Lit Capacity (Adjusted)		Available to access			Radioactivity level	Note	
							Where in UK?	Cyprus?	Oman?	Name	Number	2009	2011	Where we are	Where we want to be	2009	2011	2009	2011	2011 (Sugg)			
NUMDAH				REMEDY	BT	SMW-3	Goonhilly	yes	yes			15	15	30	60	70	100.8	70	55	55	6		
MSAGE	Yes			GERONTIC	C&W	EG	Bude					10	10	100	N/A	160	N/A	160	160		5		
Cable X				GERONTIC	C&W																4		
Cable Y				PINNAGE	Global Crossing																4		
Cable Z				PINNAGE/LITTLE	Global Crossing/Level 3																4		
GIBUS		Yes	Yes, for TAT-14	GERONTIC	C&W	TAT-14S, SMW-3		See note:				0	20	200							4	TAT-14 lands in Bude, SMW-3 Lands in Goonhilly	
LATUS		Yes		GERONTIC	C&W	Apollo N	Bude	yes (SMW-3 only)	yes (SMW-3 only)			140	140	280	200	590	1296	5120	849.6	1223.4	4		
NIGELLA				GERONTIC	C&W	Backhaul between FEA and FA1 cables	Bude														4		
STELLABLUE				GERONTIC	C&W		Skewjack			INCENSER	DS-300										4		
ARCANO				GERONTIC	C&W	Apollo S	N/A					60	60	120	800	1100	1584	5120	1569.6	2260.2	3	Direct connection between France and USA	
Cable A																					3		
Cable B																					3		
Cable C																					3		
Cable D																					3		
Cable E																					3		
CATEGORY		Yes		DACRON	Verizon							10	10	20	60				50	50	3		
ELAPSE		Yes		GERONTIC	C&W							20	20	40	100				100	100	3		
GRASP				GERONTIC	C&W																3		
HASCO		Yes	Yes	REMEDY	BT	TAT-14	Bude					10	10	20	200	640	921.6	1280	115	921.6	3		
KIRKISTOWN		Yes		GERONTIC	C&W							10	10	20	40				90	90	3		
KNAPWEED		Yes		DACRON	Verizon							10	10	20	40				50	50	3		
LINNELL		Yes		GERONTIC	C&W							10	10	20	60				60	60	3		
MONDELLO		Yes		GERONTIC	C&W	SOLAS (BROKER)	Oxwich Bay					20	20	40	60	200	15	640	60	60	3		
PRESCOTT		Yes		GERONTIC	C&W										100				0	0	3		
SCEPTRE		Yes		REMEDY	BT		Bude					10	10	20	200				400	400	3		
				GERONTIC	C&W	GLO-1	Bude					10	10	20	200	N/A	30	N/A		400	30	3	
DONNINGTON	Yes	Yes, for FA-1				FA-1, Apollo S		See note:													2	FLAG Lands at Skewjack/ Porthcurno. Apollo S does not land in UK	
	Yes			DACRON	Verizon	SMW-4	N/A					20	20								1	France to Malaysia via many countries	
	Yes			PINNAGE/LITTLE	Global Crossing/Level 3	Yellow/AC-2	Bude									980	1411.2	2540	0	0	1		
				DACRON	Verizon	Ulysses-2 (Inc VzB CH Tu)	Lowestoft									320	460.8	800	0	0	1		
				DACRON	Verizon	Ulysses-1	St Margarets Bay									40	40	40	0	0	1		
				GERONTIC	C&W	UK-France 3	Brighton									0.8	0.8	0.8	0	0	1		
	Yes			PINNAGE	Global Crossing	AC-1	Whitesands Bay									420	604.8	1600	0	0	0		
	Yes					Hibernia	Southport									844.8	1843.2	7680	0	0	0	This is Hibernia Atlantic, not Hibernia express	
	Yes					TGN Atlantic N	Highbridge									620	892.8	4000	0	0	0		
	Yes					TGN Atlantic S	Pottington									620		4000	0	0	0		
	Yes					TGN Northern Europe	Hummanby (Scarborough)									160	230.4	3840	0	0	0		
	Yes					UK-Germany 6	Scarborough									40	40	40	0	0	0		
	Yes			REMEDY	BT																0		
	Yes			GERONTIC or REMEDY?	C&W or BT?	UK-Netherlands 14 (inc FARLAND3)	Winterton-on-sea									10	10	10	0	0	0		
	Yes					Pangea North	Redcar									80	115.2	160	0	0	0		
	Yes					Pangea South	Lowestoft												0	0	0		
	Yes			VITREOUS	Viatel	Circe North	Lowestoft												0	0	0		
	Yes			VITREOUS	Viatel	Circe South	Pervensey Bay									50	72	90	0	0	0		
	Yes			LITTLE	Level 3	Tangerine	Broadstairs												0	0	0		
	Yes			PINNAGE	Interoute	PEC	Broadstairs												0	0	0		
	Yes			REMEDY	BT	CANTAT-3	Redcar									7.5	7.5	7.5	0	0	0		
	Yes					TGN Western Europe North	Highbridge									120	172	3840	0	0	0		
	Yes					TGN Western Europe South	Pottington									120		3840	0	0	0		
	Yes			STREET CAR	Interoute	Concerto 1 North	Thorpeness												0	0	0		
	Yes			STREET CAR	Interoute	Concerto 1 South	Thorpeness												0	0	0		
	Yes					Rembrandt-1	Lowestoft												0	0	0		
	Yes			REMEDY	BT	FARLAND1	Aldburgh									10	10	10	0	0	0		
	Yes					Rembrandt-2	Broadstairs												0	0	0		
	Yes			REMEDY	BT	UK-France 5 (FARLAND2)	Cheriton									10		10	0	0	0		
	Yes					Farice	Dunnet Bay, Scotland									100	40	720	0	0	0		
	Yes					Channel Tunnel													0	0	0		
	Yes			REMEDY	BT	BT-TE1	Holyhead									1	1	1	0	0	0	0	
	Yes					Sklus	Blackpool												0	0	0	0	
	Yes					ESAT1	Sennan Cove									5	5	960	0	0	0	0	
	Yes					ESAT2	Southport									5	5	960	0	0	0	0	
	Yes					UK-N Ireland LANIS	Lanis									3	3	3	0	0	0	0	
	Yes					Flag Atlantic 1 South (Not UK)	N/A									640	921.6	3120			0		
						Hermes??										0	0	0	0	0	0	0	

There are two possibilities for this, one is an old UK-Netherlands-Belgium cable (hermes Europe Railtel Ntwork), the other is Hermes Datacomms, which specializes in "Global Communications for the Oil and Gas industry"

Strikes	Value
Bude Goonhilly or Skewjack?	1
Cyprus?	1
Oman	1
Egress?	1
Supra-sekret codename?	1
known ONLY by codename	1
No current access?	-1
SRT?	1
Low capacity?	-1

Color Key	
0	White
1	Grey
2	Cyan
3	Green
4	Yellow
5	Orange
6	Red