

CORPUS ANALYSIS
Creation of a Corpus of Specialised Language

Fraternali Alessandra

DOMAIN: **TELECOMMUNICATIONS**

SPECIFIC TOPIC: **WIRELESS CABLE (introductions)**

TOTAL NUMBER OF WORDS: **5847**

All the materials have been downloaded from the Internet

Checklist

QUANTITATIVE ANALYSIS

What are the **most significant items** in that list?

Apart from articles, prepositions and conjunctions, the **item of nouns** is the most significant in the list (28 nouns out of 100 words), then **verbs** (15 out of 100) and **adjectives** (8 out of 100). These three items describe wireless cable in its major components, accessories and functions respectively. On the contrary, adverbs are not so common.

CORE VOCABULARY AND **MINIMAL CORE VOCABULARY**

MOST FREQUENT NOUNS

MINIMAL CORE VOCABULARY		
1	cable	85
2	MMDS	64
3	channels	56
4	service	38
5	system	37
6	antenna	35
7	tv	34
8	signal	32
9	systems	29
10	services	26
11	signals	24
12	channel	22
13	microwave	22
14	television	22
15	transmission	19
16	hyperlink	17
17	data	16
18	distribution	16
19	subscriber	16
20	areas	15
21	equipment	14
22	internet	14
23	wikipedia	14
24	frequencies	13
25	line	13

26	transmitter	13
27	satellite	12
28	subscribers	12
29	technology	11
30	access	10
31	band	10
32	range	10
33	site	10
34	way	10
35	video	9
36	customers	8
37	frequency	8
38	set	8
39	user	8
40	broadband	7
41	converter	7
42	power	7
43	tower	7
44	transmitters	7
45	countries	6
46	customer	6
47	home	6
48	pattern	6
49	sight	6
50	transmissions	6
51	world	6

52	amplification	5
53	antennas	5
54	carrier	5
55	combiner	5
56	communications	5
57	course	5
58	decoder	5
59	owner	5
60	point	5
61	reception	5
62	sourced	5
63	station	5
64	term	5
65	time	5
66	type	5
67	ability	4
68	air	4
69	Australia	4
70	bill	4
71	boxes	4
72	business	4
73	cables	4
74	cases	4
75	companies	4
76	coverage	4

77	downconverter	4
78	energy	4
79	filter	4
80	hours	4
81	infrastructure	4
82	license	4
83	lines	4
84	Mexico	4
85	million	4
86	network	4
87	number	4
88	operators	4
89	phone	4
90	programs	4
91	rate	4
92	security	4
93	sites	4
94	spectrum	4
95	telecommunications	4
96	telephone	4
97	terrain	4
98	week	4
99	bandwidth	3
100	box	3

MOST FREQUENT VERBS

MINIMAL CORE VOCABULARY		
1	is	115
2	are	58
3	be	51
4	can	33
5	transmit	27
6	programming	23
7	may	21
8	has	19
9	have	18
10	used	17
11	wired	14
12	costs	13
13	being	12
14	provide	12
15	was	11
16	were	11
17	will	11
18	located	9
19	been	8
20	built	8
21	installed	8
22	transmitting	8
23	receive	7
24	received	7
25	receiving	7
26	required	7
27	would	7

28	operate	6
29	served	6
30	using	6
31	broadcasts	5
32	combined	5
33	does	5
34	must	5
35	sent	5
36	transmitted	5
37	work	5
38	allows	4
39	called	4
40	delivered	4
41	designed	4
42	distributed	4
43	fixed	4
44	get	4
45	including	4
46	means	4
47	send	4
48	uses	4
49	allow	3
50	become	3
51	began	3
52	connected	3
53	could	3
54	deliver	3
55	depends	3

56	do	3
57	encoded	3
58	encrypted	3
59	fed	3
60	having	3
61	include	3
62	intended	3
63	known	3
64	made	3
65	modulated	3
66	need	3
67	operating	3
68	pay	3
69	protected	3
70	provides	3
71	reach	3
72	requires	3
73	stets	3
74	testing	3
75	want	3
76	allowed	2
77	am	2
78	auctioned	2

79	benefits	2
80	cannot	2
81	carry	2
82	choose	2
83	come	2
84	done	2
85	given	2
86	going	2
87	install	2
88	make	2
89	needed	2
90	offer	2
91	offering	2
92	operates	2
93	passed	2
94	processed	2
95	provided	2
96	reduce	2
97	require	2
98	think	2
99	transfer	2
100	transported	2

MOST FREQUENT ADJECTIVES

MINIMAL CORE VOCABULARY		
1	wireless	64
2	more	17
3	broadcast	16
4	all	15
5	each	14
6	available	13
7	over	13
8	new	11
9	only	11
10	some	11
11	digital	10
12	high	10
13	multichannel	10
14	any	9
15	educational	9
16	hard	8
17	many	8
18	most	8
19	lower	7
20	multi	7
21	rural	7
22	common	6
23	direct	6
24	less	6

25	similar	6
26	audio	5
27	cellularvision	5
28	effective	5
29	expensive	5
30	interactive	5
31	local	5
32	low	5
33	possible	5
34	several	5
35	small	5
36	special	5
37	traditional	5
38	capable	4
39	conventional	4
40	large	4
41	multiple	4
42	near	4
43	scrambled	4
44	alternative	3
45	analog	3
46	analogue	3
47	appropriate	3
48	back	3
49	certain	3

50	complete	3
51	different	3
52	directional	3
53	down	3
54	federal	3
55	general	3
56	higher	3
57	human	3
58	incumbent	3
59	individual	3
60	long	3

61	modulated	3
62	potential	3
63	single	3
64	additional	2
65	addressable	2
66	agile	2
67	central	2
68	feasible	2
69	highest	2
70	important	2

MOST FREQUENT ADVERBS

1	up	14
2	along	7
3	around	7
4	often	6
5	typically	6
6	normally	5
7	now	5
8	originally	5
9	before	4
10	directly	4
11	economically	4
12	fully	3
13	usually	3
14	approximately	2
15	environmentally	2
16	exclusively	2
17	generally	2
18	greatly	2
19	monthly	2
20	particularly	2

Adverbs do not fall within the minimal core vocabulary because they are among the less frequent items in the corpus.

QUALITATIVE ANALYSIS

MEANING AND COLLOCATION OF SOME SIGNIFICATIVE WORDS:

NOUNS

WORD	MEANING	CONCORDANCE
cable	television that is transmitted over cable directly to the receiver	<p>* Wireless Cable is a broadband service that delivers addressable multichannel television programming, Internet access, data transfer services, and other interactive services over a terrestrial microwave platform.</p> <p>* Multipoint Multichannel Distribution Service (MMDS) is often used as a synonym for A Wireless Cable."</p> <p>* ... block downconverter integrated into or mounted on an antenna mast translates the receive signals into the band utilized by standard cable TV</p>
channel	a wavelength on which television programmes or radio messages are broadcast	<p>* ... (In some markets, the 6 MHz MDS 2 channel is replaced by a 4 MHz MDS 2-A channel.)</p> <p>* ... Signals from all sources are scrambled, as in a typical cable TV headend, and each signal is delivered to a transmitter for the individual channel.</p>
antenna	sends or receives radio or television signals	* Operators broadcast multiple channels of television or related services at microwave frequencies from an antenna located on a tower, tall building, or mountain.
signal	any communication that encodes a message	<p>* The major elements of a wireless cable system include: (1) the transmit site, (2) the signal path and (3) the receive site.</p> <p>As the signal travels from the transmitter to the antenna, it loses power as it passes through the combiners, filters, waveguide, associated jumpers and connectors.</p>
equipment	an artifact needed for an undertaking or to perform a service	* The major components of the transmit site include: (1) the tower and transmit antenna, (2) the signal processing equipment and (3) the billing system.
subscriber	someone who contracts to receive and pay for a certain number of issues of a publication	* The programmers, in turn, are responsible for designing and selling their programs to the subscriber .
frequency	band of radio frequencies for e.g. transmitting a TV signal	* CellularVision/Suite12 is a company that has been granted special permission by the FCC to transmit video services on a higher

		frequency than what wireless cable uses.
transmitter	equipment used to broadcast radio or tv signals	* As the signal travels from the transmitter to the antenna . . .
satellite	a man-made object that orbits around the earth	* Most of the time the operator gets its programming by satellite . Large satellite antennas are being installed at the headend, and each program has its satellite receiver, decoder and/or transcoder (analogue or digital).
band	band of radio frequencies for e.g. transmitting a TV signal	* Two sets of 50 channels in the 28 GHz band .

VERBS

WORD	MEANING	CONCORDANCE
broadcast	broadcast over the airwaves, as in radio or television	* Operators broadcast multiple channels of television or related services at microwave frequencies from an antenna located on a tower, tall building, or mountain.
install	set up for use	* Where did Eclips install MMDS systems?
receive	convert into sounds or pictures, of incoming radio signals	* Also, the subscriber will need a UHF and/or VHF antenna if they want to receive broadcast channels.
transmit	broadcast over the airwaves, as in radio or television	* On microwave frequencies, signals within the line-of-sight are transmitted from a central location (transmitter) to subscribers' receiver antennae.

TO HAVE

WORD	CONCORDANCE
has	* However, since MDS's creation in the early 70's, the service has become increasingly popular in sending entertainment programming. * Recently, a new converter has been introduced that will send all channels out of the converter at once.
have	* They have been testing in the 28 GHz (or LMDS) band. * When fully implemented, wireless cable operations may have as many as 33 channels of broadcast and cable programming.

TO BE

WORD	CONCORDANCE
are	* The signals are received by a small microwave dish typically about 16 x 20 inches in size, or perhaps larger in outlying areas. * The components of the transmit and receive sites are discussed here.

	* Although some references to digital mode transmissions are included for purposes of comparison, unless noted all transmissions should be considered analog.
be	* ... This may be on a tall building or hill. * ... May be used in a wireless cable system. * ... This can be very costly!
is	* ... A set top converter identical in function to a standard cable TV channels selector is located near the TV receiver. * ... Wireless cable, in contrast, is regulated by the Federal Communications Commission (FCC). The signal arriving at the transmit antenna is then increased by the gain of the antenna, which yields the effective isotropic radiated power (EIRP) for which the station is licensed by the FCC.

MODAL AUXILIARY VERBS

WORD	CONCORDANCE
can	*... Affordability : Due to the lower costs of building a Wireless Cable Station, savings can be passed on to the subscribers. *... This can be very costly!
could	*... It is a fairly new service that developed from MDS (multi-point distribution service) which could only send one or two channels. *... Provide service to areas that could not normally afford or install the infrastructure. The ease of integrating multiple services to the end user.
may	*... This may be on a tall building or hill. The transmitted signal strength may be designed to any one of several standard transmitter output powers: 10, 15, 20, 50 or 100 watts.
must	*... Notice that you must provide a UHF and/or VHF antenna if you want the broadcast channels. *... In order to receive the signal, the transmitting and receiving antennas must be line-of-site.
need	*... Also, the subscriber will need a UHF and/or VHF antenna if they want to receive broadcast channels.
will	*... Also, since the signals will be sent digitally, it is expected that the range of the signal will increase by approximately 3 times.
would	*... MDS would be used primarily to send business data. Because the FCC does not regulate the content of the transmission, alternative uses would not be prohibited.

ADJECTIVES

WORD	MEANING	CONCORDANCE
wireless	having no wires	*... Wireless Cable is a broadband service that delivers addressable multichannel television programming
broadcast	made widely known especially by radio or television	*... Notice that you must provide a UHF and/or VHF antenna if you want

		the broadcast channels.
digital	of a circuit or device that represents magnitudes in digits	*...They are using Zenith's new 16-level digital transmission system which is also capable of delivering HDTV (High Definition Television).
interactive	capable of acting on or influencing each other	*...Internet access, data transfer services, and other interactive services over a terrestrial microwave platform.
coaxial	having a common axis	*...building through coaxial cable into a channel program selector located near the television set.

Is there any linguistic pattern that is typical of the target language?

What are the most common forms of nominalization?

Can you detect compound noun phrases that are typical of this variety?

The observation of the collocation of some of the most frequent words in the list points out the absence of linguistic pattern that can be considered typical of the target language, forms of nominalization and compound noun phrases typical of this area.

However, **acronyms** are very frequent. They are the only useful device used to short groups of nouns.

Ex.:

Mmds (multipoint multichannel distribution service)

Fcc (federal communications commission)

EIRP (effective isotropic radiated power)

HDTV (High Definition Television)

From the observation of certain items, can you detect the presence of specific **language functions** essential in the target language?

CONNECTORS

WORD	CONCORDANCE
However (Lang. funct.: contrast)	*... However , using the 28 GHz band means sacrificing signal range. *... However , since MDS's creation in the early 70's, the service has become increasingly popular in sending entertainment programming. *...120 channels of straight broadcast are possible: the average of 30 channels is what most systems will have, however many have 120 channels, and improvements in digital technology leave promise for more.
Because (Lang. funct. : cause)	*...This provides customers with higher signal levels than would have been delivered with an omnidirectional transmit antenna because the energy is concentrated and radiated over a smaller area. *...This is because the Wireless Cable Box only provides a UHF/VHF tuner.
Since	*... Since the signal is interleaved, it is possible for a large number of services to occupy a narrow bandwidth. *... since MDS's creation in the early 70's,

(Lang. funct. : cause)	the service has become increasingly popular in sending entertainment programming.
Such (Lang. funct. example)	*...a common carrier also may provide services such as audio only transmissions, telephone, or data. *... (such as rain) *... such as TV *... such as an apartment complex or office building
Thus (Lang. funct. consequence)	*...Wireless cable, unlike traditional cable TV, requires no easements to operate and thus requires no franchise. *...and thus began the move to TVRO thus permitting the use of adjacent-channel systems.

In order to detect specific language functions I have focused my attention on the collocation of some connectors:

however, because, since, such and thus

indicate contrast, cause and example respectively like in general English.

The analysis points out that contrasting, giving reasons and making examples are important in the corpus. In fact, it tells what is wireless cable and how does it work in terms of contrasting (with traditional cable TV), giving reasons (why is it better than cable TV) and making examples.

[What are the most common verbal tenses?](#)

[Are there any passive forms? How often are they used and when?](#)

The present simple and the passive are the most common verbal tenses used in the corpus.

As written above, the corpus describes wireless cable in its major components and functions. These descriptions are expressed by using the present simple and the passive form. And the passive is the most used form in the corpus.

The list of the most frequent verbs points out that *is* and *are* are the most used verbs in the corpus, and with certainty they are auxiliaries for the passive form because the other most frequent verbs are expressed in the form of the past participle.

Also modal auxiliary verbs are significant. For example, *can* is the most frequent verb after *to be*. It is used to tell the functions of the wireless cable and its accessories. *May* and *will* are used to express possibilities as they are often found in “*if sentences*”.

Must is used to express something you can’t avoid doing if you want something to happen.

[Personal considerations on the corpus:](#)

Before analysing my corpus, I thought I was going to read a very specialized group of texts full of those difficulties that are common within ESP area, such as any kind of nominalizations, compound nouns, very technical vocabulary and so on.

But, the analysis has shown the absence of such a devices, so in this sense my expectations have failed.

Even the vocabulary is not so technical, and apart from the frequent use of acronyms I have not found any specific or technical difficulty typical of the target language.

For all these reasons I can consider my corpus as soft ESP, and maybe it helps to demolish the myth according which ESP is completely different from GE.

How will your syllabus be influenced by the outcome of your investigations?

First of all, I would like to say that whatever ESP area, a good teacher should start thinking of his-her course according to students' needs analysis. They are very important because, as we know, students learn according to their needs and interests. And that is totally true as nobody will learn anything he himself considers so boring and/or completely useless!

However, I perfectly know sometimes teachers have to teach something boring such as theory, but again also in this case a good teacher should find the most interesting way of presenting boring things. So, a good teacher can't avoid motivating, involving in an active way, and why not enjoying his-her students.

Now, according to the outcome of my investigations, I can make two main considerations. The first regards vocabulary. Even if it is not so specialised, the teacher should spend some time in vocabulary enrichment as nouns are the most frequent item in the corpus. A special attention should be given to acronyms; the teacher should explain what are they, how do they work and why are they important.

The second consideration regards verbs. The teacher should spend time in reinforcing the passive voice, its formation and use, because it is the most common verbal form, and the modal auxiliary verbs (the use of can, the second most used verb, and the use of may/will in if sentences).

Last but not least, the teacher should also insist on the importance of some connectors, such as however, because, since, such and thus, because like in GE they are useful device to understanding the logical relationships in texts.

Alessandra Fraternali