Transformation, exploitation, and complication of transcribed calls in the financial domain:

the case of Earnings Conference Calls examined in the argumentative perspective.



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The overall project

computational techniques for retrieval and analysis of Argumentative Patterns (APs); units of analysis for describing constellations of argumentative moves that respond to the constraints of the activity type

Mining argumentative patterns in context.

A large-scale corpus study of Earnings Conference Calls of listed companies.

Applied research:

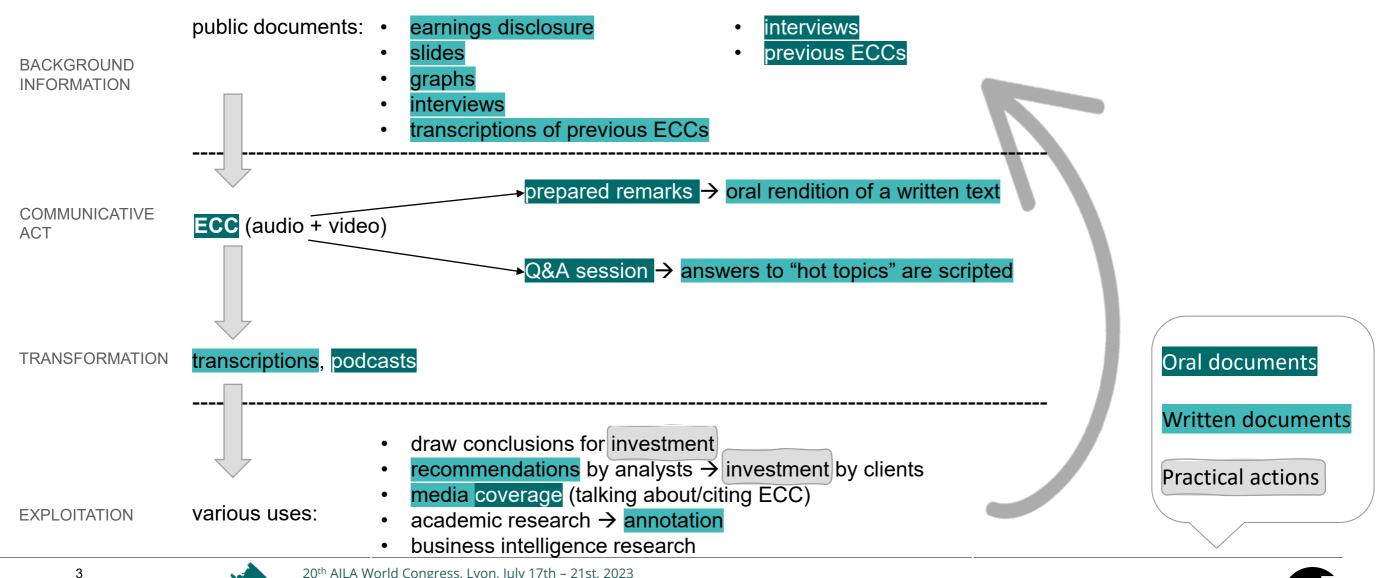
ECCs as an important field of interaction, since they affect company valuation by the financial markets (ECCs); teleconferences held by corporate leaders with financial analysts, immediately following the quarterly earnings announcement







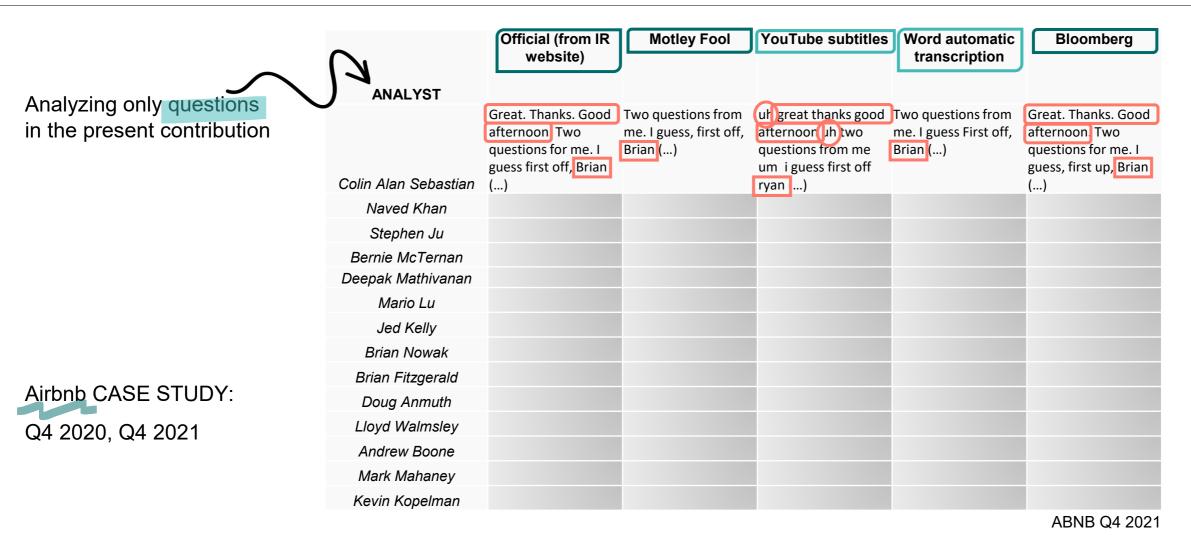








Overview of available transcriptions





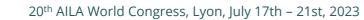
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ABNB Q4 2020	official_Motley Fool	official_YT subtitles	official_Word	official_Bloomberg	Motley Fool_YT subtitles	Motley Fool_Word	Motley Fool Bloomberg	YT subtitles_Word	YT subtitles Bloomberg	Word_Bloomberg
ANALYST					Subtities		Tool_bloomberg		Subtrities_biooniberg	
Brian Nowak	0,99017638	0,978992999	0,970673084	0,989917159	0,97115612	0,974226713	0,995803833	0,974660456	0,971886873	0,972687364
Heath P. Terry	1,000000119	0,995939672	0,992102146	0,998217106	0,995939672	0,992102146	0,998217106	0,992705584	0,994638562	0,991684377
Lloyd Walmsley	0,972683311	0,962651968	0,928150535	0,973882794	0,985163569	0,950197041	0,997714639	0,952159524	0,987618506	0,952081561
Justin Post	0,979773819	0,950550437	0,960168839	0,986567378	0,975371003	0,986788511	0,973996818	0,986420214	0,966805577	0,973479867
Jed Kelly	0,996091664	0,981815159	0,980771422	0,998176932	0,974284947	0,985427916	0,99612987	0,973006606	0,98325789	0,982455075
Brent Thill	0,997779667	0,972877622	0,989806175	0,998258412	0,971325696	0,992116451	0,997986019	0,973119557	0,972226024	0,989902616
Colin Alan Sebastian	0,998785615	0,991818547	0,996328473	0,990200996	0,991469443	0,996231794	0,991858006	0,99290055	0,989198625	0,992176473
Michael Graham	0,994801521	0,982139051	0,991302133	0,990150511	0,977061749	0,985062361	0,992315352	0,984160841	0,975748658	0,981080472
Jason B. Bazinet	0,994774222	0,982645273	0,987298012	0,99627763	0,990681708	0,992114782	0,995644629	0,991321683	0,987930477	0,987191081
Justin Patterson	0,999602556	0,99255383	0,988207459	0,995334923	0,991758108	0,988837242	0,994604111	0,985016584	0,990918756	0,985404611
Stephen Ju	0,986530781	0,977284074	0,982951939	0,984725237	0,976889729	0,992235422	0,977972388	0,976923943	0,980277419	0,973945498
Mario Lu	0,997123182	0,989990354	0,986428857	0,995027065	0,984715343	0,983495891	0,992955565	0,986927152	0,988824904	0,987277627
Kevin Kopelman	0,988082945	0,950015247	0,937022924	0,967123806	0,95957911	0,955219388	0,983484864	0,895745039	0,960814595	0,955114305

(fuzzy matching of turn embeddings)









(Dis-)similarities

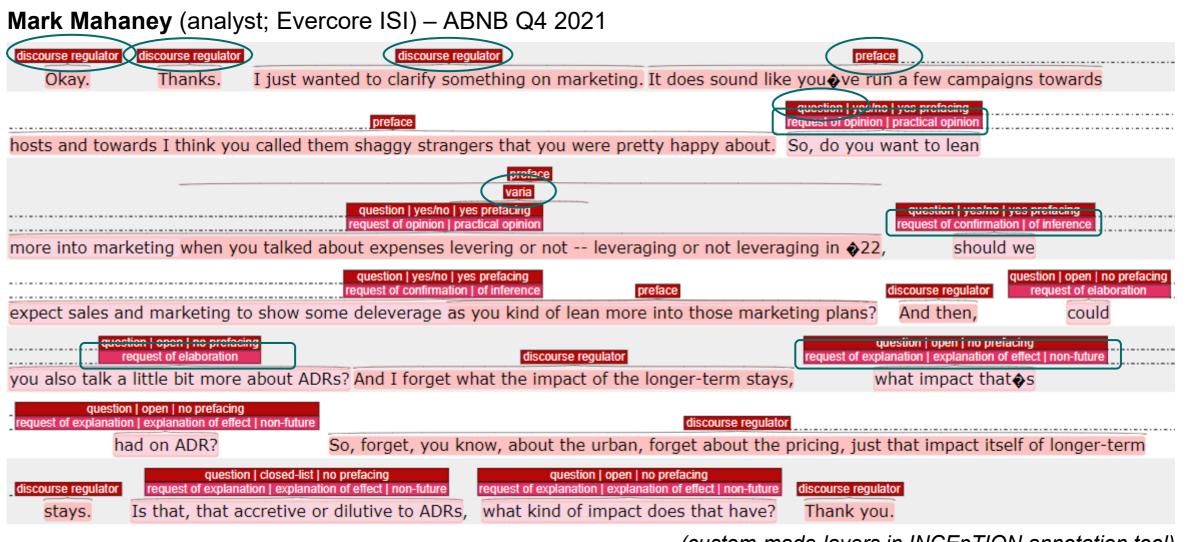
ABNB Q4 2021	official_Motley Fool	official_YT subtitles	official_Word	official_Bloomberg	Motley Fool_YT	Motley Fool_Word	Motley	YT subtitles_Word	YT	Word_Bloomberg
ANALYST	Ť				subtitles		Fool_Bloomberg		subtitles_Bloomberg	
Colin Alan Sebastian	0,982890189	0,974911451	0,983359694	0,993528247	0,985750496	0,988575399	0,979034901	0,974230647	0,97070384	0,98644346
Naved Khan	0,998276472	0,97510463	0,984826326	0,977415442	0,976306856	0,983292401	0,979770303	0,968914747	0,977541208	0,966411889
Stephen Ju	0,997352242	0,979704976	0,977353454	0,983781874	0,971304059	0,971849263	0,980508983	0,977327228	0,979612708	0,986102819
Bernie McTernan	0,956310272	0,941243112	0,94319135	0,997235239	0,868487239	0,903784931	0,949436784	0,971768141	0,94910568	0,942869544
Deepak Mathivanan	0,991979361	0,9468925	0,980100811	0,955580175	0,930712223	0,980594158	0,952542484	0,955124259	0,97287786	0,977960289
Mario Lu	0,962746084	0,946015477	0,949475646	0,947615206	0,960721731	0,968580008	0,976907909	0,977533698	0,9635306	0,960727096
Jed Kelly	0,995707989	0,963340759	0,990816474	0,996650875	0,966136456	0,993227482	0,994723439	0,96837306	0,96257937	0,990085185
Brian Nowak	0,989760041	0,976302445	0,991306007	0,993360877	0,969441354	0,983607888	0,98957783	0,980514109	0,977570176	0,987517893
Brian Fitzgerald	0,983826578	0,964423537	0,97094667	0,953332305	0,948787034	0,9573825	0,930110335	0,977069259	0,941257596	0,954414845
Doug Anmuth	0,953678489	0,938568234	0,943477273	0,948052168	0,980595171	0,968989909	0,982733905	0,982118368	0,98697263	0,976091266
Lloyd Walmsley	0,967581511	0,946371913	0,916270375	0,957924962	0,948005199	0,925946712	0,973340392	0,961554766	0,980900884	0,955329061
Andrew Boone	0,994721234	0,986934185	0,985624313	0,99825269	0,984195948	0,985661745	0,995349884	0,982360005	0,987945318	0,984339118
Mark Mahaney	0,950995445	0,956618249	0,956157327	0,960011899	0,961525917	0,971814036	0,984248757	0,989525616	0,983536184	0,985123277
Kevin Kopelman	0,984812915	0,972604632	0,971656561	0,9891361	0,985240698	0,980430603	0,989458501	0,981919825	0,975753427	0,978154063

(fuzzy matching of turn embeddings)





An example of annotation



(custom-made layers in INCEpTION annotation tool)



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					Α	qualitative example
	official	Motley Fool	YT subtitles	Word	Bloomberg	- PROPOSED -
/	Okay. Thanks. Just wanted to	Okay. Thanks. (I)just wanted to	okay thanks um just wanted to	Just wanted to clarify something	Okay. Thanks. Just wanted to	Okay. Thanks. Just wanted to
	clarify something on marketing. It	t clarify something on marketing. It	clarify something on marketing it	on marketing. It does sound like	clarify something on marketing. It	clarify something on marketing. I
	does sound like you've run a few	does sound like you've run a few	it does sound like you've run a	you've run a few campaigns	does sound like you've run a few	does sound like you've run a few
	campaigns towards Hosts and	campaigns towards hosts and	few campaigns towards hosts and	towards hosts and towards I think	campaigns towards hosts and	campaigns towards Hosts and
	towards I think you called them	towards I think you called them	towards i think you call them uh	you called them shaggy strangers	towards, I think you call them,	towardsI think you called them
	shaggy strangers that you were	shaggy strangers that you were	shaggy strangers that you were	that you were pretty happy	shaggy strangers that you were	shaggy strangers, that you were
	pretty happy about. So, do you	pretty happy about. So, do you	pretty um happy about so do you	about. So do you want to lean	pretty happy about. So do you	pretty happy about. So, do you
	want to lean more into	want to lean more into marketing	want to lean more into marketing	more into marketing when you	want to lean more into marketing	want to lean more into
	marketing? When you talked	when you talked about expenses	when you talk about expenses	talked about expenses levering or	when you talked about expenses,	marketing? When you talked
	about expenses, leveraging or no	tevering or not leveraging or	lever levering or not leveraging or	not leveraging or not leveraging in	nleveraging or not leveraging in	about expenses, levering or not
	leveraging, in 2022, should we	not leveraging in '22, should we	not leveraging in 22 should we	22, should we expect sales and	'22, should we expect sales and	leveraging or not leveraging, in
	expect sales and marketing to	expect sales and marketing to	expect sales and marketing to	marketing to show? You know,	marketing to show some de-	2022; should we expect sales and
	show some deleverage as you	show some deleverage as you	show you know some d leverage	some deleverage as you kind of	leverage, as you kind of lean	marketing to show, you know,
	kind of lean more into those	kind of lean more into those	as you uh kind of lean more into	lean more into those marketing	more into those marketing plans?	some deleverage as you kind of
	marketing plans? And then, could	dmarketing plans? And then, could	those marketing plans and then	plans. And then could you also	And then could you also talk a	lean more into those marketing
	you also talk a little bit more	you also talk a little bit more	could you also talk a little bit	talk a little bit more about Adrs	little bit more about ADRs, and I	plans? And then, could you also
	about ADRs? And I forget, the	about ADRs? And I forget what	more about adrs and i forget	and I forget what the impact of	forget what the impact of the	talk a little bit more about ADRs?
	impact of the longer term stays,	the impact of the longer-term	what the impact of the longer	the longer term stays, what	longer-term stays, what impact	And I forget what the impact of
	what impact that's had on ADRs?	stays, what impact that's had on	term stays what impact that's had	l impact that's had on ADR? So	that's had on ADR? So forget	the longer term stays what
	So, forget about the urban, forget	t ADR? So, forget, you know, about	on adr so forget about the you	forget about the, you know, the	about the urban, forget about the	impact that's had on ADRs? So,
	about the pricing, just that impac	tthe urban, forget about the	know the urban uh forget about	urban forget about the the the	pricing, just that impact itself of	forget you know about the urban
	itself of longer term stays, is that	pricing, just that impact itself of	the you know the pricing just that	pricing, just that that impact itself	f longer-term, stays is that	forget about the pricing, just that
	accretive or dilutive to ADRs?	longer-term stays. Is that, that	that impact itself of longer term	of the longer term. Is is that. Is	accretive or dilutive to ADRs?	impact itself of longer term stays;
	What kind of impact does that	accretive or dilutive to ADRs,	states is that is that accretive or	that accretive or dilutive to Adrs?	What kind of impact does that	is that accretive or dilutive to
Ν	have? Thank you.	what kind of impact does that	dilutive to adrs what kind of	What kind of impact does that	have? Thank you.	ADRs? What kind of impact does
		have? Thank you.	impact does that have thank you	have?		that have? Thank you.
	8	20 th AILA World Congress, Ly	on, July 17th – 21st, 2023			





Conclusion: what's the best transcription?

None and all of them...

- What do we need to focus on?
- What are the features we are interested into?
- What are the desired outcomes?
- How much time are we willing to spend on this task?

this helps us determine what the ground truth (i.e., the "base transcription" on which to build further) could be for our needs...

...but also the **additional features/characteristics/aspects** that we might want to extract from alternative transcriptions available and merge to the ground truth!

The evaluation of a transcription closely relates to the analytical purposes one has for it!



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Thank you for your attention











