The SEACOM Undersea Fibre Optic Cable Project: A Critical Discourse Analysis

Omolola Ola Bankole
Kasky Bisimwa
Isabel Jansen van Vuuren
P. Uche Onumajuru
Wallace Chigona

Department of Information Systems
University of Cape Town.

Abstract

The construction of the Seacom undersea fibre optic cable linking eastern and southern Africa to Europe and India has generated enormous media interest. It has been reported that the Seacom cable will provide affordable broadband services which will in turn improve South Africa's economic and social growth. Since the media contributes towards creating reality it is necessary to examine the media discourse on a project with potentially huge public impact. This study involves a critical discourse analysis of the media articles on the Seacom cable over the past two years with focus on South Africa. The theoretical framework of the study is based on Habermas' Theory of Communicative Action (TCA) which was operationalised through the application of critical hermeneutic analysis and content analysis techniques to the corpus. TCA is based on examining the discourse for truth, legitimacy, sincerity, and comprehensibility claims. The analysis of the corpus revealed significant distortions in the media discourse on the Seacom cable. It was noted that the media has mainly focused on the potential benefits of the project and has paid little attention to the challenges the populace may face in order to enjoy the benefits offered by the project. The findings of the study are important to media reporting on huge projects so as to avoid distortions.

Keywords: Seacom, Critical Discourse Analysis, Habermas, Broadband, Fibre optic

1. Introduction

There has been an unprecedented growth in the global information and communication technology (ICT) industry in recent years (UNCTAD, 2007). The number of broadband Internet subscribers has grown across the globe, most especially in developed nations; the term broadband is synonymous with high speed Internet access. Despite this trend, South Africa still lags behind in broadband penetration rate compared to other African nations (Gillwald, 2007). The Seacom fibre optic cable was conceived as a means of provisioning affordable broadband Internet access to East and Southern Africa, and can be seen as a part of the wider use of ICT to promote economic growth and social inclusion (World Economic Forum, 2009). The Seacom cable which has a total bandwidth capacity of 1.28 Tera (trillion) bits per second and spanning 17,000 kilometres in length was commissioned on 23 July 2009 (Seacom, 2009). The cable connects South Africa, Mozambique, Madagascar, Tanzania, and Kenya to global undersea fibre optic networks via France and India. The objective of the Seacom project is to deliver broadband or high speed Internet access at reduced cost. Hence, the predicted low cost of international telecommunication in these countries, has generated a significant amount of media discourse on the Seacom fibre optic cable project.

There has been a lot of media interest in the Seacom fibre optic cable project. The majority of the media coverage has been positive and in support of the project. The discourse surrounding a huge ICT project such as the Seacom project is of academic interest due to its potential in determining public opinion and choices in a society. The media is believed to be successful in selecting and shaping the presentation of messages to influence public opinion (Cukier, Ngwenyama, Bauer & Middleton, 2008). Thus, there is a need to reveal possible distortions in the media communication. The purpose of this research is to expand horizons by looking beyond text provided in newspapers, to

uncover possible shortcomings and unacknowledged motivations and agenda. This is because media discourse is one of the ways through which reality is constructed (Chigona & Chigona, 2008).

2. Research Questions

This study analyses the media discourse on the Seacom project in South Africa. The media articles were drawn from a wide range of South African newspapers. This critical analysis of the media discourse on the Seacom project will attempt to answer the following research questions. The primary research question for this study is: What is the nature of the discourse surrounding the Seacom fibre optic cable project in South Africa? The associated secondary research questions are:

- What are the distortions in the media on the Seacom fibre optic cable project?
- What is the reason for the distortions?
- What are the potential impacts of the distortions on public opinion and decision making of the stakeholders?

It is assumed that through using Habermas' theory of communicative action (TCA), we will be able to identify how the institutional actors have shaped the public sphere and discourse surrounding the Seacom project, as well as reveal any underlying assumptions made surrounding the project. This study has the potential to impact consumers, businesses, and future investors in South Africa.

3. The SEACOM broadband project

International telecommunication infrastructure has continued to witness increased investments given the rise in demand for global communications. Presently, fibre optic cables dominate the technologies deployed by the global telecommunication industry to the extent that 94% of all international telecommunications is transmitted via these cables which provide high bandwidth capacity and low cost communications (Warf, 2006). The ability to transmit vast quantities of data in real time is crucial to the economy (schiller, 1999). In addition, access to sophisticated channels of communication has become one of the conditions for large corporations to simultaneously operate in multiple national markets in order to coordinate their activities (Warf, 2006).

South Africa and East African countries are still underserved thus having limited telecommunication bandwidth capacity. Therefore, undersea fibre optic cables became a major part of the telecommunications infrastructure supporting global broadband communications and internet access. The broadband penetration rate in South Africa is a reflection of the country's Internet penetration rate. The number of broadband Internet subscribers which includes mobile and fixed users, stands at 1.02 million giving a penetration rate of 2.07 percent; available data shows that there are 378,000 fixed broadband subscribers in South Africa (ITU, 2008b). These low numbers of Internet users including broadband subscribers in South Africa is to a large extent a reflection of the number of Africans with access to the Internet.

Many countries seek to increase their broadband penetration rate due to the expected benefits. Khalil, Dongier, & Zhen-Wei (2009) reported that for every 10 percentage point increase in broadband internet access, there is an increase in economic growth of 1.3 percentage points. Also, the access to better ICT corresponds with economic growth and on the social growth (Selouani and Habib, 2007; World Economic Forum, 2009). Song (2009) emphasised that in Sub-Saharan Africa, bandwidth prices are 30 to 40 times more expensive than in the United States.

Although Seacom undersea cable connects South Africa and East Africa to the rest of the world, South Africa had an existing connection to the SAT-3/WASC/SAFE undersea fibre optic cable which also serves countries in West Africa. Undersea fibre optic cables currently being laid in Sub-Saharan Africa include the East Africa Submarine System (EASSY) which also connects South Africa, TEAMS (The East Africa Marine System), and "Lion" which are expected to be operational by mid-2010; GLO-1 cable was recently launched in Nigeria (Song, 2009). It is necessary to highlight the ownership

structure of the Seacom cable as it would give an understanding of organisations with interest in the project; this is provided in Table 1.

Table 1: Seacom ownership structure

Partners	Shareholding (%)
Industrial Promotion Services	26.56
Venfin	25
Shanduka	12.5
Convergence Partners	12.5
Herakles Telecom	23.44

Industrial Promotion Services is an initiative of the Aga Khan Fund for Economic Development (AKFED), which is an international agency investing in projects in developing countries. Venfin is a private venture capital company with a diversified investment portfolio in a number of countries. Shanduka and Convergence Partners are wholly owned by South Africans. Lastly, Herakles Telecom is an international organisation with significant investments in infrastructure on the African continent.

4. Critical discourse analysis

Critical information systems (IS) research includes a wide variety of diverse research, all of which have a critical theoretic orientation. Framing the purpose of research in the context of critical theoretic approach is concerned with aspects such as domination, power and control on the one hand and liberation, empowerment and emancipation on the other hand. Discourse analysis "focuses on attempting to explore the ways in which the use of language structures our assumptions" (Cukier & Thomlinson, 2005, p. 89). The nature of discourse applies to varying phenomena. Critical Discourse Analysis (CDA) is an approach for understanding IS as a constructed phenomenon within other social structures (Howcroft & Trauth, 2005).

Discourse is given as a specific form of language which is either spoken or unspoken and a specific form of social interaction. Discourse is the text and talk in social practices. The focus of analysis is on the set of grammatical rules, the differences or set of rules for transforming statements in the language (Howcroft & Trauth, 2005). It is concerned with language and its relationship with other elements in the social process. It is also a discourse analysis technique which focuses on the abuse of social power, the manner in which dominance and inequality are enacted, reproduced and resisted by text and talk in the social and political context. Most CDA is concerned about how the different social structures are deployed. CDA requires us to shift our understanding of how we talk and it gives information systems researchers the opportunity to further analyse power relations by deconstructing language (Howcroft & Trauth, 2005). Thus the main purpose of the critical discourse analyst is to take explicit position, understand and expose social inequality (Van Dijk, 2001).

CDA is concerned with social and political problems - these social problems are mostly multidisciplinary. It not only tries to explain social problems but also aims to explain them in terms of social interaction and social structure. The focus of CDA is on how discourse structures enact, confirm, legitimate, reproduce or challenge relations of power and dominance in society. The following principles (Van Dijk, 2001), form the base of CDA: CDA is concerned with social issues; CDA is concerned with power relations which are constantly changing; Discourse is comprised of culture and society; and Discourse is historical. Others are the link between text and society is mediated by an intermediate propagator; discourse analysis is interpretative and explanatory; and discourse is a form of social action.

4.1 Theoretical approach

There are several types of CDA with diverse theoretical and analytical approaches which can be selectively adopted in order to obtain desired objectives (Wodak & Meyer, 2009). A general

perception of all CDA approaches is that discourse is viewed as language use and it is a form of social action (Chilton, 2005b, p.20 as cited in Wodak & Meyer, 2009). Critical discourse is based on a number of philosophical positions which are identified in literature; Hammersley (1997) identified three of such philosophies as Marxism and Frankfurt, Habermas' universal pragmatics which depends on communicative action of human behaviour, and lastly decisionism. Cukier et al (2008) and Chigona & Chigona (2008) were more interested in the CDA philosophies that are commonly used in IS research namely: Foucauldian (Foucault theory) and TCA. Habermas' TCA is explained herein as it is the theoretical framework employed in this study.

TCA focuses on the meaning or interpretation of speech and provides standardized normative analysis for human communication and interaction (Cukier et al., 2008; Chigona & Chigona, 2008). The objective of TCA is to create a theoretical approach for critical analysis of media discourses and it determines choice, public opinion and decision making in the society (Cukier et al., 2008). TCA has a "*three-world*" ideology which is vital for the understanding of social action, and these are the "*subjective world"*, "*objective world"* and *"social world"* (Cecez-Kecmanovic & Janson, 1999). The "*subjective world"* offers personal beliefs and experiences of the individual, the *"objective world"* defines truth in its totality and the *"social world"* identifies the normative truth.

Habermas views public speech in two perspectives and categorised them as thus: (1) to achieve understanding between speaker and listener (*i.e. communicative*), (2) to achieve understanding to only the speaker (*i.e. strategic*) (Cukier et al., 2008). Habermas identifies four validity claims which are associated with understanding the motive behind a public speech: "*Truthfulness"*, "*legitimacy"* and "*sincerity*" deal with the practicality of language. These pertain to the content of communication and are termed as communication competence while "*comprehensibility*" is referred to as linguistic competence since it is concerned with intelligibility and clarity (Habermas, 1984; Cukier et al., 2008).
"*Truthfulness*" is concerned with if the content of communication would hold in the objective world. Untrue, prejudiced statements and incomplete speech are forms of distortions in discourses (Van Dijk, 2006; Cukier et al., 2008). The "*legitimacy*" claim checks if the communication conforms to norms of the social world. It poses that understanding of public speech can only be achieved through the equal representation of all parties involved in the discourse (Cukier et al., 2008; Chigona & Chigona, 2008). Legitimacy is achieved by stating proper references of experts and identifying the individuals that were allowed to voice their opinion (Cukier et al., 2008). "*Sincerity*" claim checks the speaker's intention with the actual speech. It tests for regularity between what was said and what was meant by the speaker through inference from the speech (Habermas, 1984). The "*comprehensibility*" claim checks the linguistic legibility, clarity and precision of communication. Comprehensibility claim refers to statements which are clear in syntax and semantics (not confusing to the public) (Cukier et al., 2008; Chigona & Chigona, 2008). Incomplete speech as well as excessive statements can impair comprehensibility of discourse (Cukier et al., 2008).

4.2 Identified gaps in literature

There have been limited efforts in applying Habermas' validity claims to empirical studies. Habermas himself has brought to attention the importance of applying empirical work to build on his theories. Little research has been done on public discourse on information technology. Much of existing research focus on micro-level analysis of organisational communication in IS development and not many research focus on macro-level analysis of communication in IS (Cukier et al., 2008). This study will therefore aim to bridge these gaps. Firstly Habermas' validity claims will be applied to the media discourse surrounding the new Seacom cable. This research will also contribute to the field of IS since a limited amount of research has been done in the IS field about technology in the public sphere.

A limited amount of research has been done on how technology companies shape our individual opinion (Cukier et al., 2008). A large amount of research has been done using CDA but not many have applied Habermas' TCA to their studies. Critical research in IS mostly surrounds communication within an organisational context and not on public discourse on information technology in the public

sphere. This research is exploratory in nature as it aims to validate the discourse surrounding the new Seacom fibre optic cable through applying Habermas TCA.

5. Research Methodology

5.1 Approach to theory

The theoretical lens for this study is based on the TCA. This is a Habermasian approach for conducting a critical discourse analysis of text or text-analogue. TCA tests for the "ideal speech situation" in texts by applying four validity claims: truthfulness, legitimacy, comprehensibility, and sincerity, as a means of revealing communication distortions. TCA will be operationalised through the application of critical hermeneutic analysis and content analysis techniques to the corpus. This approach of applying qualitative and quantitative research methods or approaches with respect to critical hermeneutic analysis and content analysis techniques has been applied in previous studies (Chigona & Chigona, 2008; Cukier et al., 2008). This approach is seen as rigorous and suitable for analysing a large number of documents (Chigona & Chigona, 2008), and is therefore adopted for this study.

Hermeneutics Seeks to understand the meaning of text or text-analogue i.e. anything that can be considered as a text such as culture or an organisation (Myers, 2009). The process of deriving the meaning of a text involves a hermeneutic circle in which the "movement of understanding is constantly from the whole to the part and back to the whole" (Myers, 2009, p. 185). Critical hermeneutic analysis is a critical social theory perspective of hermeneutics which Seeks to reveal the distortions inherent in communications (Ngwenyama & Lee, 1997); hence its suitability for this study. Content analysis was employed through counting specific terms in support of arguments related to the validity claims (Cukier et al., 2008).

5.2 Data source and sample size

The corpus is made up of 35 independent media articles from 10 diverse South African newspaper publications and a news portal. The articles were news publications that have a general target audience. They were sourced using the search word "*broadband*", "*fibre optic*" and/or "*Seacom*". The articles were collected by searching via Mail and Guardian (www.mg.co.za); News 24 (www.news24.com); Fin 24 (www.fin24.com); The Times (www.thetimes.co.za); engineering news (www.engineeringnews.co.za); and the Independent On-line (IOL) portal (www.iol.co.za). Articles ranging from August 2007 (start of the Seacom project), to August 2009 (when it was launched) were downloaded from the internet. Due to language limitations, media articles in other languages were not considered; therefore, only English articles were gathered for the research. Table 2 provides the names of the newspapers and number of articles gathered for this research.

Table 2: Source of the media articles used in this study

Newspaper	Number of articles
News 24	7
Fin 24	5
Mail & Guardian	6
Business Report	7
Cape Argus	2
IOL	1
The Times	3
Sunday Independent	1
Sunday Tribune	1
Engineering News	1
Business Daily	1
Total	35

5.3 Data Analysis

The procedure employed in the analysis is as follows.

1 *Reading through the corpus*. The entire corpus was read with a view to understanding individual articles within the context of the entire corpus. It involved the concept of the hermeneutic circle in the process.

2 *Coding and content analysis*. The corpus was analysed for assessment to Habermas' four validity claims of truthfulness, legitimacy, sincerity, and comprehensibility. The media 'texts' was coded for validity claims expressed in each article with the aid of guiding questions provided in Appendix A, which is adapted from Stahl, McBride, and Elbeltagi (2005) and Vosloo (2008). A count of specific terms relevant to arguments presented was conducted. This gave an indication of recurrent themes in the discourse.

3 *Explanation of findings*. This involved the explanation of the findings with respect to adherence or non-adherence to validity claims and the implications.

A Microsoft Excel spreadsheet was used as coding aid. Each claim type was coded based on the guiding questions. It is necessary to highlight that it is possible for a statement be coded into multiple claim categories. In our analysis, we mainly focused on what is wrong (distortions in the media discourse) rather than what is right (undistorted communication) as is expected of a critical researcher (Walsham, 2005).

The research approach employed for this study ensured reliability through four researchers who participated in analysing the data. This ensured inter-coder reliability and produce reliable results as there would be consensus during the process. The validity of the research methodology is also assured as previous studies (Chigona & Chigona, 2008; Cukier et al., 2008; Stahl et al., 2005) have used the same approach of critical hermeneutic analysis and content analysis techniques for critical analysis of media discourses.

6. Findings

The corpus was analysed based on the four validity claims. A total number of 480 claims were identified in the discourse. The number of occurrences for each of the four claims (Level-1 category claims) is shown in Table 3.

Table 3: Total number of validity claims

Claim	Occurrences	Percentage (%)
Truth	276	58
Legitimacy	112	23
Sincerity	53	11
Comprehensibility	39	8
Total:	480	100

6.1 Truth

Truth claims were assessed using the guiding questions in Appendix A, and these involve argumentation and evidence in the discourse. The breakdown of the truth claims identified is summarized in Table 4.

Table 4: Level 2 truth claims

Level 2 (Truth)	No. of claims
Description	44
Benefits	126
Evidence	16
Distortion	38
Omissions	16
Ideology	4
Problems	25
Faulty logic	7
Total:	276

6.1.1 Description

The discourse contains a significant number (37 claims identified) of descriptive claims. The claims present the description of Seacom such as its capacity, length, route and the cost. The life expectancy of the cable was also highlighted - *"The undersea cable is expected to have a 25-year design life"* [SP9]. In terms of the length of the cable, it was noted that the media reported contrasting lengths of the cable. Some articles indicated that the length was 15000km (SP1 and SP9), while others noted that it was 17000km (SP7, SP8, and SP11). Most of these descriptive claims are presented at the beginning of the articles. Such descriptions are expected in the discourse since Seacom is a new project.

6.1.2 Benefits

The discourse covers a range of benefits associated with the Seacom cable. A total of 126 benefit claims were identified. As summarized in Table 6, the benefit claims were categorised into seven groups.

Table 6: Level 3 claims - benefits

Level 3 (Benefits)	No. of claims	Example
Economic Growth	14	*"The higher bandwidth will also help with meeting the New Partnership for Africa's Development (Nepad's) goals of development for Africa's renewal and its full and beneficial integration into the global economy"* [SP15].
Social Growth	3	*"…positive utilisation of the cable and the realisation of infinite social and economic possibilities unleashed by our arrival"* [SP12].
Development	7	*"…its cable will increase productivity as workers start to access information through fast broadband"* [SP25].
Drop in internet prices	38	*"…Seacom said it would charge R267 per megabit per second per month, compared with more than R3 500 currently charged by its competitors"* [SP24].
Financial benefit	11	*"The consortium proposed the cable to reduce international telecoms costs in South Africa"* [SP20].
Other benefits	42	*"encourage research and development in the ICT sector"* [SP8].
Affordability	6	*"…deliver high speed broadband at affordable prices"* [SP16].
Total:	102	

It was noted that the discourse emphasized the benefits of the Seacom project, most of which appear to be true according to literature. Several studies have discussed the cost effectiveness, of EASSY, Seacom and SAT-3/SAFE fibre optic cable. These undersea fibre optic cables have been associated with lower cost of connectivity and development by bridging the digital divide between developed and developing countries (Mutula, 2008). What is not often mentioned or emphasized is that the benefits cannot be achieved through the Seacom cable alone. What about other factors impacting on social and economic growth, and development, such as social capital (Daut, 2006; Rupasingha, Goetz and Freshwater, 2002)? Hence it can be said that these claims are incomplete and do not provide enough information on how these benefits may be achieved. Such explanations can give readers a clearer understanding of the expected benefits.

6.1.3 Evidence

Despite the high number of benefits claims in the discourse, it was noted that most of the claims are not supported with evidence. Only 14 evidence based claims were identified. The evidence is mainly based on research findings. For example in SP32 it was mentioned that *"The growth rate in local Internet users is now 4.5 million. This is the finding of the Internet Access in South Africa 2008 study, released by research company World Wide Worx. The study was backed by Cisco Systems"* [SP32]. It was also noted that seven claims used statistical data to justify the claims e.g:

> *"Giving access to internet and e-mail - had dropped by 90 % since 2007, with the cost now R800 000 a month for a link, compared to R1.8 million two years ago. Prices have come down and consumers certainly are benefiting"* [SP31].

Compared to the number of benefits claims, the evidence provided in the discourse appear not to be sufficient. Further, it was noted that the majority of these evidences are presented in a way that does not provide the reader with the opportunity to verify them.

6.1.4 Distortion

Distortion-based claims in the context of truth claims refer to statements that cannot be categorically said to be true. A total of 39 distortion were identified. The main point of distortion is that throughout the discourse Seacom has been identified as the fibre optic cable that will be the solution to all of South Africa's and Africa's broadband needs. An example of such claims is: *"Seacom remains set to become the first cable to connect East and Southern Africa to the rest of the world with plentiful and inexpensive bandwidth"* [SP13]. This is distorted since there currently are other cables serving countries in the Northern and Western Africa regions. The 39 distortion claims is significant as it invariably means the public has been fed some inaccurate information with respect to the Seacom cable.

6.1.5 Omissions

Omission-based claims are claims with incomplete statements which potentially leave gaps or raise questions in the minds of the public. Sixteen omission-based claims were identified in the discourse. A few examples of such claims follow.

> *"The cable could improve lives and help grow the economies of the countries involved" [SP15]*. While this claim may not be disputed, it however omits information on how the Seacom undersea fibre optic cable is expected to contribute to the economic growth of the countries involved.
>
> *"Neilson said as it stood, Africa had too little international capacity" [SP2]*. This claim does not give any indication as to what the present capacity is and how it compares to other parts of the world.
>
> *"There could be a substantial oversupply of international bandwidth capacity if all ten of the planned undersea cables planned get under way" [SP2]*. The claim that there are ten planned undersea cables for Africa is disputable, more so when these cables are not identified.

Having 16 omission-based claims in the corpus shows that omissions are a significant part of the claims.

6.1.6 Ideology

Four ideology-based claims were identified in the corpus. These claims are mainly centered on the government policy and interventions in the telecom industry. For instance, is noted in SP24 that the telecommunication operators took advantage of the consumers since the *"consumers … are not as well educated about comparative tariffs for broadband"*. The articles therefore calls for consumers to "*demand price cuts, or choose cheaper operators"* to force operators to reduce their tariffs. This is an ideological claim that characterizes the manner in which prices of telecommunications services are likely to be determined in South Africa. This appears to be the case as the government had to step in through its regulator – the Independent Communications Authority of South Africa (ICASA) in order to force a reduction in interconnection fees charged by mobile telecommunication companies (Reuters, 2009).

Another group of ideological deal with the ownership of the telecommunication companies with the aim of redressing the past inequalities. In SP20 it is noted that:

> *"The department of communications is demanding that the international owners of Seacom....sell equity to local companies before it can operate locally … "Companies that wished to participate in the cable networks projects should hold a network service license and*

have black equity shareholding, as required by the information and communications technology charter" [SP20].

This is another claim that reflects the South African government's ideology on the ownership structure of companies operating in the country. This claim asserts the need for telecommunication companies to have network service licenses and fulfill broad-based black economic empowerment (BBBEE) requirements.

6.1.7 Problems

A total of 23 claims were identified as being problem-based claims. This category has five sub-claims as shown in Table 7.

Table 7: Level 3 claims - problems

Level 3 (Problems)	No. of claims	Examples
Access	4	*"Neotel offers coverage for home and small business use in Johannesburg, Pretoria, Cape Town and Durban, but the services available differ from area to area and there are still many locations where Neotel is not available"* [SP14].
Infrastructure	7	*"The fact that we still have such a shortage of broadband infrastructure means that price reductions are only really likely when infrastructure is no longer at a premium, McDonald said"* [SP24].
Piracy	4	*"Seacom's cable installation plans delayed from an initial ready-for-service date of June 27, to a revised date of July 23"* [SP6].
Telkom monopoly	6	*"South Africa has only one cable linking it to the rest of the world and this has been controlled by former monopoly Telkom"* [SP27].
Other problems	2	*"We need prices to come down because if they remain high, there is no incentive for consumer to use the services"* [SP31].
Total:	**23**	

Access claims refer to problems that have a potential to prevent South Africans from gaining general access to the Seacom cable. Neotel which is a telecommunications company in the mould of Telkom is Seacom's partner in South Africa, and has landing rights to the Seacom cable meaning it takes care of Seacom's facilities within the South African territory (cf. SP35). SP14 points that the majority of South Africans do not have access to telecommunication facilities and therefore cannot enjoy the benefits of the cable. Related to the problem of access is *Telkom monopoly.* The monopoly Telkom possesses with respect to South Africa's telecommunication infrastructure is significant. The monopoly Telkom has over the SAT-3 undersea fibre optic cable and which it exploited to its advantage as there has been no competition. This was identified as a problem in the corpus which Seacom could remedy by means of competition it now provides.

Inadequate telecommunications *infrastructure* is also noted as a major problem. Here, the shortage of broadband infrastructure is highlighted as being responsible for the high price of broadband internet. The scourge of *piracy* in waters along the East coast of Africa is also highlighted in the media discourse. The trajectory of the Seacom undersea cable involved laying the cable underneath the sea.

The claims under *other problems* include claims that do not fall within the categories discussed so far. The particular problem here is that present broadband internet prices discourage consumers from

subscribing to the service. The other claim still in SP31 states that prices will not drop until after the 2010 Soccer world cup as much of the bandwidth provided by Seacom will be geared towards the bandwidth requirements of the world cup.

6.1.8 Faulty logic

Vosloo (2008) describes faulty logic as faulty cause. Thus, claims based on faulty logic were identified by determining if the reasoning behind such claims or statements were faulty. Six claims were identified in the discourse as having exhibited faulty logic. Some examples of texts illustrating faulty logic follow.

> *"I've often been asked why South Africa doesn't produce Google, Facebook, Twitter or any other of the new breed of Internet companies and entrepreneurs. Simple — no broadband*" [SP30]. This claim exhibits faulty logic because it fails to take into account that the companies highlighted are mainly based in the USA despite the fact that there are other countries in Europe that have better broadband penetration rates (ITU, 2008b). Therefore there is no valid causative link between broadband access and innovation, as other factors must be considered as well.
>
> *"Seacom would be cheaper than other fibre optic or satellite options at R267 per megabit per second per month, compared with R231 000 for satellite"* [SP23]. This claim is adjudged to be faulty due to comparison being made between the bandwidth prices of Seacom fibre optic cable and satellite links. The proper comparison would have been to compare the bandwidth prices of Seacom cable with SAT-3 cable since they are both fibre optic cables.
>
> *"He added that the expectation was strong within Seacom for its cables to ensure that people are connected in townships like Khayelitsha in Cape Town, Soweto and Umlazi or KwaMashu in KwaZulu-Natal, which have been ignored by traditional players, even Telkom"* [SP31]. This claim is based on faulty logic due to the Seacom cable being associated with inland telecommunication networks. The Seacom cable is an undersea fibre-optic cable and must depend on telecommunication companies to put in place inland fibre optic networks.

The critical nature of this study demands highlighting claims based on faulty reasoning or logic as they distort the media discourse as discussed.

6.2 Legitimacy

Legitimacy claims Seek to determine if all the parties affected by the discourse have a fair opportunity to raise their opinions. One can test the legitimacy claims by checking if some voices have been privileged while some have been silenced (Chigona & Chigona, 2008). A total of 112 claims relate to legitimacy in the corpus.

It was noted that legitimation was achieved through the use of experts and analysts. In the discourse 30 claims were identified as using experts and analysts to legitimise arguments. Some examples of the expert voices used in the articles were Suveer Ramdhani, spokesman for Seacom [SP31]; Lindsey McDonald, a telecoms analyst at Frost & Sullivan [SP24]; Lyndall Shope-Mafole, director general at the department of communications [SP20]. The summary of the voices in the discourse is presented in Table 8.

Table 8: Level 3 claims – Stakeholders/Speakers

Level 3 (Stakeholders/Speakers)	No. of claims
Seacom	34
Experts	30
Funders (non-speakers)	1
Other speakers	16
Total	81

As noted in Table 8, most of the discourse has used Seacom as the predominant source for legitimization. The spokesperson of Seacom refers many times to the benefits of the decrease in price for example in [SP31]. This appears to be in appropriate since Seacom is not responsible and will not be involved with the cost of lower bandwidth in South Africa; rather that would be the responsibility of service providers responsible for the internal infrastructure e.g. Neotel. The demand for lower costs of bandwidth will only decrease once the internal infrastructure is available.

In the discourse, 16 claims were made by speakers who are not experts or from Seacom. These include speakers such as internet service providers, government officials, and telecommunications consultants. However, it was noted that some players were not heard in the discourse. More than 50% of the Seacom cable is owned by South African investors e.g. Nedbank and Investec Bank. However, their voices were not represented in the discourse. Also, there was no claim made by people associated with the EASSY cable which will be launched in June 2010. The EASSY cable is another undersea fibre optic cable project that is under construction. In addition, comments by government officials, funders, and Telkom personnel were few in the discourse regarding the Seacom cable and the state of broadband internet services in South Africa.

6.3 Sincerity

Sincerity is assessed through examining if what is said is consistent with the reality (Cukier & Eagen, 2003). If the communication is sincere, the speaker is honest in what he/she conveys. Sincerity claims test the motive behind the utterances (Chigona & Chigona, 2008). The following questions were used to examine sincerity claims in the discourse.

- Are metaphors and hyperboles used?
- Do metaphors and connotative words promote or suppress understanding?
- Do metaphors and connotative words create false assurances?

A total of 53 sincerity claims were identified in the discourse. The breakdown of the sincerity claims is shown in Table 9. There are three sub-claims (level-2 category claims) that make up the sincerity claims: metaphors, false assurance, and hyperbole.

Table 9: Level 2 claims - sincerity

Level 2 (Sincerity)	No. of claims
Metaphors	23
False assurance	14
Hyperbole	16
Total:	53

6.3.1 Metaphors

The metaphor claim is subdivided into appealing to emotions, associative words, and connotative words (See Table 10).

Table 10: Level 3 claims - metaphors

Level 3 (Metaphors)	No. of claims	Example
Appealing to emotions	10	*"Seacom is turning on the switch for you to enjoy true broadband* [SP3]*".*
Associative words	9	*"Our immediate Internet and rugby future is in a few hands* [SP30]*".*
Connotative words	4	*Now that Seacom is finally here and active, let's hope something significant will come to all us long-suffering Telkom broadband users. Bring the rain* [SP28].
Total:	23	

In the discourse, 10 claims were identified as appealing to emotions. Seacom is identified as the solution to the previous monopolistic situation when broadband was available but limited. For example, in [SP25] the cable was said to be "*fundamental in unlocking the continent's high-speed internet potential*". Here the Seacom is presented as the solution to the continent's internet problem. This claim is distorted since the Seacom cable will only serve countries in East and Southern Africa, and not the entire African continent. The exaggeration involved in this statement attributes a great potential to the Seacom cable. Further in SP16 it is said: *"I would like to thank and congratulate SEACOM for making our dreams come true"* [SP16].

Nine claims were identified as relating to the use of associative words throughout the discourse. The following claims illustrate this.

> *"It may be apt to compare it to the 52,000 enthusiastic Bulls supporters at Loftus on Saturday night as they won the Super 14, but the journo didn't paint themselves blue or wear helmets with (real) horns on them* [SP30]*".* The launch of the new Seacom cable is associated with the rugby game at Loftus stadium which is a great sporting atmosphere.

A total of four claims were identified which relate to the use of connotative words in the discourse. The following claims illustrate this.

"*Our tireless efforts for the past 24 months have come to fruition. Turning the switch on creates a huge anticipation"* [SP29]. This claim depicts the Seacom cable as a switch.

Many of the statements describe the new Seacom cable as the solution to the African continent's internet bandwidth needs. The Seacom cable does lay the foundation for the provision of broadband internet access in the countries involved in East and Southern Africa, but the internal telecommunication network infrastructure in each country needs to be adequate in order to reap the benefits that the Seacom cable offers.

6.3.2 False assurance

False assertions created by metaphors and connotative words in a statement can be used to assess the sincerity of claims. A total of 14 false assurance claims were uncovered in the discourse. This category claim is made up of three sub-claims economic growth; price decrease; and other false assurance claims (See Table 11). These claims reveal underlying intentions which are hidden in the discourse. Considering the metaphors and connotative terms in the discourse in the corpus, the underlying meanings of these statements were made evident. Some assumptions which were made have the ability to influence the thought of the reader. For instance, the statement "*Seacom would serve as a catalyst for the east and south of Africa to speed up its economic development"* [SP16] portrays that the Seacom fibre optic cable will bring about rapid, instant or immediate transformation in the eastern and southern African economies.

Table 11: Level 3 claims - false assurance

Level 3 (False assurance)	No. of claims
Economic growth	4
Price decrease	7
Others	3
Total:	14

Four claims linked to economic growth were identified in the corpus. There have been many promises that Seacom fibre optic cable will be of benefit to individuals and businesses. It has been said that it will increase the growth rate of broadband subscribers and speed up economic development. These claims have been identified in the corpus and are illustrated below.

> *"Seacom would serve as a catalyst for the east and south of Africa to speed up its economic development*" [SP16]. *"The growth rate in local Internet users is now 4.5-million"* [SP31].

Seven claims were identified in the discourse which discuss the decrease in the price of broadband services and the time in which the drop in price should be expected. For instance in SP14 it is said that *"Neotel, offers cheaper broadband and voice services than its rival Telkom"*. While some statements are realistic about the price of broadband services, some are not. Different statements were made but all agreed there will be a price reduction. The undecided issue surrounding the discourse on pricing is: When exactly will broadband internet become cheaper?

There are other level-3 false assurance claims that do not fall under the economic growth and price decrease claims. These claims can be regarded as false since these statements seem unrealistic to achieve.

6.3.3 Hyperbole

A total number of 16 hyperbolic expressions were identified in the corpus. Several exaggerations were made in the statements provided by the stakeholders and experts on the Seacom project. The hyperbolic statements were noted to provide extended meanings in the discourse. In SP25 is was noted that *"… the cable was fundamental in unlocking the continent's high-speed internet potential"* [SP25]. Further in [SP26], it was stated that: *"In what has been hailed as the most significant change in the history of information technology on the continent"*. Such statements make one to believe that the Seacom fibre optic cable would connect all the countries on the African continent. In reality, this was not intended as the cable will only be servicing eastern and southern African countries.

There are also several statements which stressed that the Seacom cable would bring about fast internet connectivity. Terms such as superfast internet, high-speed were used in leading one into believing the cable directly provides these benefits. For instance, *"The long-awaited Seacom undersea cable went live, bringing with it a glut of superfast Internet connectivity"* [SP28]. Such statements are exaggerations of the benefits of the cable since there are other factors, like the end user infrastructure which determine the speed of connection to the internet. Therefore, sincerity claims identified in the corpus can be questioned based on the exaggerated benefits found in the discourse.

6.4 Comprehensibility

The comprehensibility claims (level-1 category claim) were identified in the corpus by making reference to the guiding questions listed below.

- Is there use of jargon?
- Are there terms that are not explained?
- Is irrelevant information presented?

- Are the syntax and semantics of the language (English) upheld?
- Is there evidence of obfuscation?

A total of 39 comprehensibility claims were identified in the corpus. The claims were grouped into five level-2 sub claims namely; jargon, unexplained terms, irrelevant information, syntax and semantics, and unclear statements. (See Table 12).

Table 12: Level 2 claims - comprehensibility

Level 2 (Comprehensibility)	No. of claims
Jargon	27
Irrelevant information	3
Syntax and Semantics	5
Unclear statements	4
Total:	39

The assessment on whether a statement is a jargon is difficult to accomplish (Vosloo, 2008); a text that appears to be jargon to an individual may not be jargon to another. Nevertheless, we categorised word(s) that are not likely to be understood by the general public that read the media articles, as jargon. A total of 27 claims were identified as jargon in the corpus. They were further classified as technical and economic jargon.

A total of 26 technical jargon statements were identified in the corpus. For example,

> *"..fixed-line broadband technologies like CDMA EV-DO"* [SP2].*"Neotel will have a Johannesburg PoP and Cape Town PoP"* [SP3]. These statements are referred to as jargon since, the terms CDMA EV-DO and PoP used in the above statements were not explained.

7. Discussion and conclusion

The analysis shows that the media discourse on the Seacom cable is fraught with a range of distortions. Particularly note worthy is the emphasis on the benefits of the project and under-representation of problems that may beset the project. There is need therefore for future studies to identify the possible reasons for such distortions. Such understanding would help rectify the distortions in the media and hence recreate a fair representation of ICT projects. There are other sources of information such as radio and television, which influence the public opinion. However, media articles and newspapers still have a significant customer base. A major number of customers are usually acquired through news and media articles (Villanueva, Yoo & Hanssens, 2008). Therefore, newspaper and media articles have large impact on public discourse.

One possible factor which was identified was inherited distortions. A large number of the corpus was found to provide two contrasting information on the length of the Seacom undersea fibre optic cable. Some of the articles stated the length of the cable to be 15000km long while others reported it to be 17000km. A likely reason for this distorted communication could be the Seacom website. The media section of the website states "Seacom today announced that its 1.28 Terabits per second (Tbps), 17,000 kilometres." (Seacom, 2009). Also, on the same website, in the Frequently Asked Questions section, it was stated that "From June 2009, the 1.28Tbps 15,000km undersea fibre-optic cable will provide ..." (Seacom, 2009). The discrepancy in the length of the cable from the Seacom organisation most likely led the media into re-creating this distortion and consequent lack of uniformity in the reported cable length across media articles While it is interesting to ask why the Seacom organisation provided the distorted information, it is also interesting to ask why the media did not pick the discrepancy and engage with the Seacom company.

This collective distortion in the media discourse makes it necessary to set the records straight. The benefits of broadband internet access which the Seacom cable has brought to the fore will materialize when the following are in place: (1) proper policies and regulatory frameworks, (2) good national telecommunications infrastructure, preferably incorporating fibre optic transmission networks, and (3) other undersea fibre optic cables under construction become operational. The findings of this study also emphasize the need to continue to apply a critical 'lens' to media discourses as the role of the media is an important one that involves informing the public. The implications of these distortions are the inherent dangers of misinformation. It creates unrealistic expectations of the benefits of the Seacom project from the populace.

In conclusion, it is necessary to set claims in proper perspectives in order for their purpose to be realised. The claim that the Seacom cable will benefit the generality of South Africans including people living in townships and rural areas appears to be inaccurate. Economic and social growth in the townships and rural areas can only be established once basic needs have been provided. Maslow‟s hierarchy of needs has proven that no personal growth can take place without the basic needs of the individual being met (Chapman, 2009).

Further research should investigate how the discourse is likely or not likely to change when the cables become operational. The result of such research can be compared to this study which examined the nature of the discourse at the launch of the Seacom fibre optic cable project.

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A: Guiding Questions

Truthfulness: Argumentation and evidence	
T1	What is said about Seacom fibre optic cable?
T2	Are the issues and options clearly defined?
T3	What costs and benefits have been identified and assessed?
T4	What evidence has been provided to support these arguments?
T5	Has the relevant information been communicated without distortion or omission?
T6	Are there underlying problems referred to - explicitly or implicitly - in the discourse?
T7	Are there ideological claims which are unexamined?
Legitimacy: Whose interests?	
L1	Who is speaking, who is silent, and what are their interests?
L2	What is privileged? What is not said about the technology?
L3	What is assumed or implied?
L4	What is missing or suppressed in the discourse?
L5	How are the decisions legitimised?
L6	Who is involved? Who is not involved?
L7	What are the stakes and interests involved or excluded?
Sincerity: Metaphors and descriptors	
S1	Are metaphors and hyperboles used?
S2	Do metaphors and connotative words promote or suppress understanding?
S3	Do metaphors and connotative words create false assurances?
Comprehensibility: Ease of understanding	
C1	Is there use of jargon?
C2	Are there terms that are not explained?
C3	Is irrelevant information presented?
C4	Are the syntax and semantics of the language (English) upheld?
C5	Is there evidence of obfuscation or unclear statements?