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An Innovation Success – But Who Gets the Revenues? Opera Software in Nigeria

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Abstract

The case giving the base for this article is a very rich network case, i.e. it describes the importance and the function of direct connections for a business highly embedded into a business environment. All the important existing business relationships in the case are directly connected to other business relationships. What the company is doing with a counterpart in Finland influences what it can do in Nigeria or other parts of the world. This is due to the fact that products and technical solutions are highly interrelated – embedded into each other. These connections give two different types of possibilities or restrictions for involved companies. First, it results in a specific network structure in each moment, which in the short run makes room for certain networking processes to exploit the given structure at the same time it excludes others. Second, it also makes room for a certain number of networking processes trying to exploit changes in the specific structure. Together these two types of networking processes create some room for each of the involved companies to maneuver while simultaneously creating very distinct restrictions. One special restriction is that all relationships and the value creation they represent can not be transformed into money! The specific structure and how it affects the chance to make money points to an extremely important feature of all (?) networks. The division or distribution of monetary rewards is not directly related to value creation. There are two different processes taking place at the same time. One is the value creation and the other is the division of rewards. These processes are probably related, but in a much more complicated way than we usually have assumed in earlier research. It is an aspect of the networks that we have to give much more attention in future studies.

Keywords: Network, value creation, monetary rewards, money, internet, mobile phones.

1. Prologue

When doing research, perhaps once in a life time you find something special, like the perfect diamond, or the perfect case. This diamond, or case, has some special properties that, when you see them you know you have been looking for them without knowing it. The case presented in this article – the development of the Norwegian company Opera Software especially in relation to Africa and Nigeria - is such a perfect case, at least for the more senior researcher. It is a perfect example of a company within a business landscape dominated by network processes. One specific network feature is the existence of specific connections due to embeddedness and this is at the centre of the development of the case. The company we will follow is both very lucky and successful in its networking processes dealing with these connections. One basic reason for the existence of embeddedness and specific connections is that the involved resources are heterogeneous, making the interfaces between them important for their use. The involved actors are constantly trying to develop these interfaces, in order to better use all resources. This is what makes this company so lucky. The existing specific connections influences both the acting itself as well as the outcome of the acting. First, the development of a company in such a business landscape directly depends on the success of its related partners. Second, it is also dependent on the company's ability to get close to the basic dimensions behind the embeddedness, which often, as in this case, are technological features and connections. A third factor is how these specific connections can be economized

from the focal company's point of view. There are only some of the dimensions in the totality that can be transformed into the financial dimension.

All three of these aspects are central issues in the Opera Software case. First we will briefly describe the theoretical and methodological approach used when investigating and designing the case before presenting it in sections 3 to 8. In section 9, we will come back to the central features of the case and the strategic situation of a company in a world dominated by network processes.

2. Theoretical and methodological approach

The industrial network theory will be used here to analyze the development of Opera in Africa. This theory argues that innovation and growth are the result of complex and substantial interactions among firms leading to business relationships (Håkansson 1987; Håkansson et al. 2009). These business relationships can be analysed using the Activity-Resource-Actor (ARA) model (Håkansson and Johanson 1992). The model illustrates the complex content and inter-connectedness of a relationship by dividing it into layers of actors, resources and activities. Often a relationship is dominated by one of the layers, but it is the interplay among these layers that defines the relationship. The model also illustrates how an actor, activity or resource always exists in several contexts on different levels; within the company, in a business relationship and in the wider network (Håkansson et al. 2009; Håkansson and Snehota 1995). It is a framework that can be applied in order to clarify how certain qualitative aspects

of networks, such as embeddedness, relatedness and interdependence, are influencing the way actors can behave or how products and services are assessed. It is a way to identify critical relative dimensions and their effects. This model was used to structure the data collection regarding the development of Opera and its context.

The research has been carried out as an explorative and empirically grounded case study. We have aimed at describing, understanding and explaining the process behind Opera Software's massive growth in some special countries in Africa – especially Nigeria. We wanted to learn about the interactions, relationships and networks that led to, and were subsequently created and continued to play out in, the process. Based on this approach the purpose of the research was to document and analyze the case based on rich empirical, context-dependent data. Our aim is to provide qualitative and semantic explanations by taking an interpretive and narrative approach.

Interviews are the main data source. Nineteen informal and semi-structured interviews were conducted with Opera employees, previous Opera employees, users of Opera's products and others knowledgeable about Nigeria, such as natives, expats, and experts. The interviews were carried out face-to-face when possible, and through video conferencing, utilizing Skype and Opera Software, when practical circumstances such as distance and time dictated it. See appendix A for a detailed list of the interviews performed and how, where and when they were conducted. The interviews were primarily recorded and transcribed, with only a few exceptions where detailed notes were taken instead.

The case has guided us in selecting informants through snowball sampling (Berg and Lune 2012, 52). When an interview was completed, the informant was asked to suggest other relevant interview subjects. In this way, the informants helped us map out the network and led us to other relevant informants in the context of the case.

To understand the case context, we based our study on a mix of informants. Some are Nigerians or Africans who can explain regional matters and affairs with the insights and limitations of their native backgrounds and local presence. Others include Nigerian expats who relocated to Norway and have been abroad long enough to see their own country from the outside, and some Norwegian experts.

We also used user statistics provided by Opera Software. We studied the numbers documenting user uptake and growth in Nigeria, the most popular web sites visited by the users, handsets used and data consumption. These served as useful data for understanding, analyzing and framing the use of Opera's solution in Nigeria.

Secondary data and documents were used to complement and verify the primary sources. To gain an initial overview of Opera Software, we studied the annual reports, financial reports, quarterly reports and press releases from 2000 - 2012. Opera also publishes a monthly report called the State of the Mobile Web (SMW), which also proved valuable to verify facts. All of these reports helped us understand the basics of the organizations, their history and growth, and served as useful background data when interviewing employees from Opera HQ. In addition, official reports and statistics served as a supplement to help us understand more of the context and details of the case.

Annual reports, financial reports and press releases were used with care. These are conducted for very specific purposes and within strict frameworks, and are created for investors and PR purposes. The same applies to reports issued by organizations

such as the United Nations (UN), McKinsey, the International Monetary Fund (IMF) and the International Telecommunication Union (ITU). They represent only a small part of the case, and were used mainly for an initial understanding of the company and the company context. We found it particularly important to rely on Nigerian respondents in describing the context, to avoid the stereotypical and often very simplified version of reality.

3. Introduction to the case

In the wake of the Arab Spring of North Africa and the Middle East in 2011, it is plain to see that the Internet can be a catalyst for change. The populations of Egypt, Tunisia, Libya and several other nations were able to better communicate, organize activities and talk to the outside world through social media and mobile Internet access. The Norwegian company, Opera Software, played a significant role in the midst of these events and experienced a 900% increase overnight in Egypt during the most intense phase of the revolution. Opera also immediately climbed to become one of the ten most popular brands in the country (Interview with Opera's marketing manager).

Africa may be its own continent, but it is still part of the global world. This was the experience of Opera, which suddenly, without any effort, became an important supplier in Africa. Their mobile web browser solution currently has a major share of the African users.

Opera Software originated from a research project that was initiated in 1994 at Telenor, a telecommunications company in Oslo. Despite interesting results, Telenor decided to terminate the project as it did not fit with their priorities at the time. Jon von Tetzchner and Geir Ivarsøy, who had worked on the project, decided to leave Telenor and founded Opera Software as an independent company in 1995. They continued to develop the technology and launched a web browser in 1996 (Annual report 2000). A web browser, also simply referred to as a browser, is a software application necessary to display, locate, navigate and search for content on the Internet.

In 2000, Opera experienced their commercial breakthrough with the browser Opera 4.0 for Windows. This browser was downloaded more than 1 million times the first month after launch, and Opera soon became the third largest browser after the well-established American competitors, Microsoft's Internet Explorer and AOL's Netscape Navigator, in terms of users (Annual report 2000). This did not go unnoticed and Time magazine commented in 2001:

"It has to be one of the strangest business plans in the history of the Internet. A small software company based in remote Norway takes on two of the biggest powers in computing, Microsoft and Netscape. Odder still, this tiny firm enters a market – Web browsers – in which the competition gives away its products for free. Are these guys crazy? (Time magazine 2001)"

Also in 2000, approximately eight percent of the world's population had access to the Internet, mainly through PCs. But Opera expected that users would access the Internet in several different ways in the future and increasingly access the Internet through convenient handheld devices. With this as a backdrop, Opera acquired the Swedish company Hern Labs AB in 2000. This was a company that specialized in cross-platform technologies, located at the heart of the Swedish cutting-edge area for development of mobile communications technology (www.opera.com). This strengthened Opera's possibilities for developing solutions not only for computers, but also for a range of new devices such as feature phones, smart phones, tablets and TVs.

Early on, Opera decided to invest in HTML and Web technology, including handheld mobile Internet devices. This decision was made when it was highly uncertain whether the World Wide Web or the Wireless Application Protocol (WAP) would survive and become the industry standard. WAP was initially intended for mobile phones and was a simplified, alternative technology compared to the web. Neither WAP nor the Web could provide a satisfactory user experience on mobile phones in the early days. WAP was too simple, and the Web was too big to run on the available mobile handsets. Because Opera had invested heavily in its Web-based desktop platform, it never implemented WAP technology. Opera strongly believed WAP was inferior, and implementing it would go against the company DNA. History has shown that ‘the best solution’ is not always the one that will survive, and at the time WAP was a real threat to the future existence of the Web. Instead, Opera developed Opera Mini, a small and fast proxy-based web browser. That way, it could deliver the full Internet and an improved user experience to a range of new devices, including basic feature phones (Interview with Opera’s former CTO).

By the end of 2011, Opera had 777 employees, 897 MNOK in revenue, and 142 MNOK in profits, and could offer a selection of free web browser products for the end-user (Annual report 2011). The four main browser categories were:

Opera for Desktops, first launched in 1996, intended for personal computers. Reached 60 million users in Q1 2012.

Opera Mini, first launched in 2005, intended for basic feature phones with Java script technology. Reached 169 million users in Q1 2012.

Opera Mobile, first launched in 2008, intended for smart phones. Reached approximately 25 million users in Q1 2012.

Opera Devices Software Development Kit (SDK), was delivered as a solution for Original Equipment Manufacturers (OEMs) of devices since 2005, intended for a variety of Internet devices, such as TVs, game consoles and tablets (Annual report 2005).

For the last 2-3 years Opera has become a particularly interesting actor within mobile web browsing in Africa and other emerging markets. To begin with, the Norwegian browser company found itself operating in Africa more or less unintentionally. That is to say, more to its surprise than as a conscious strategy, a rather large user group was discovered in certain African nations, such as Nigeria and South Africa. These were areas where Opera had made no marketing or PR efforts (Interview with Opera’s CTO). In these emerging and less-developed regions, the majority of people had limited access to PCs. Landline phone infrastructure was poorly built or absent in many regions. Mobile phone penetration, however, was widespread and there was a great desire to access the Internet. The mobile phone was an opportunity to connect. In January 2012, the mobile browser Opera Mini had a market share of 73% in Africa (Statcounter 2012a), and was growing the market exponentially.

4. Opera Mini - The Technical Solution

The mobile web browser Opera Mini has become particularly popular in Nigeria and other emerging markets, where most users rely on feature phones as their only device for accessing the Internet. Opera Mini is a product with properties that allow for compression of data traffic, making it possible to access Internet content and services on relatively poor and unstable networks (Interview with Opera’s former CTO).

4.1 Product features and technical details

The development of Opera Mini is described as a bit of a coincidence. In 2004, Opera competed for a contract to develop an application for a producer of mobile phones (OEM). But the application developed and offered by Opera was too technically advanced at the time, and the contract was awarded to a competitor. Opera used advanced C++ programming language, whilst the OEM's phones could only support C programming language. The CEO explains that two Opera employees had to work from the OEM's office during the development period. They spent a great amount of time and effort to make the solution work on the OEM's phones, and eventually managed it, although by that time it was too late and another solution was selected for the contract. However, in working this way, disconnected from HQ activities and daily operations, the two Opera developers had to wait a week for deliveries from a subcontractor. Because they were not satisfied with the user experience from the mobile applications that existed at the time, they decided to spend the waiting time experimenting with a new proxy-based web application for mobile devices. In fact, Opera had considered this solution a few years earlier, but because of an intense industry discussion about whether the web or WAP would survive in the end, Opera's management decided not to follow this path. They feared a proxy-based solution would position Opera closer to WAP technology, and that over time it could cannibalize their existing portfolio. However, when the two developers called the HQ in 2004 asking for permission to develop a proxy-based mobile application in their idle time, they received approval. Soon they shipped a small prototype to the HQ. It worked very well for a week, and everybody was enthusiastic and agreed it looked very interesting. Because Opera was not awarded the contract for the OEM, there were no other plans or projects intended for the two Opera developers, and the management decided to let them continue experimenting with the proxy-based prototype. This project resulted in the release of Opera Mini in 2005 (Interview with Opera’s CTO).

This unique technology differentiated Opera Mini from other proxy-based solutions at the time, and was the result of Opera’s underdog position and financial situation in the early years. Compared to large and immensely rich competitors like Microsoft and Netscape, Opera was financially weak. While the competitors could hire an abundant number of developers for programming tasks, Opera had to make do with only a few. The former CTO explains how this became an advantage:

When you only have a few developers, the source code, which is what you are programming, will necessarily become smaller than if written by many developers. Imagine, if you have many construction workers, you can build a large house, right? If you have only a few workers, you have to rely on building a smarter and smaller house. Therefore, when it became clear that devices other than computers would be equipped to do more than simple dedicated tasks, the Opera source code was already small enough to run on such devices. The fact that Opera had been poor became one of our strongest competitive advantages. Opera was lean and mean. (Interview with Opera’s former CTO).

Because the source code was small, Opera could take the full web browser, initially developed for personal computers, and make it available for mobile phones. In fact, Opera Mini functioned like a full web browser, while other solutions merely pretended to be web browsers. When users type in a uniform resource locator (URL), web browsers request the various content of that web page. The content then comes in a number of pack-



Figure 1: Illustration of Opera Mini 7 Smart Page

ages that contain elements such as HTML, which is the structure of the page; CCS, which is the visual presentation; JAVA Script; pictures and maybe plug-ins. The information is delivered in chunks to the device that requested the web page and the browser puts it all together by calculating where the different elements should be positioned on the screen and how it should be presented. The Opera former CTO uses the analogy of assembling and connecting many Lego bricks for describing the functionality of a browser. The main difference from running a browser intended for personal computers is that, when using Opera Mini, the data processing takes place on one of Opera’s servers, rather than on the device (see Figure 1). The server compresses and translates the web page into a very limited language that Opera Mini understands and displays it on the screen (Interview with Opera’s former CTO). This makes Opera Mini lightweight in terms of memory consumption and efficient on a basic feature phone. In 2012, Opera Mini was compatible with over 3000 different mobile phone handsets. The browser provides up to 90% data compression that leads to a corresponding reduction of cost for both mobile operators and end users. In addition, it offers higher speed on weak or unstable networks.

Opera Mini is continuously updating and improving with new functions, designs and technology. The software is known for being easy to use and can load several web pages at the same time. An address bar and a Google search bar are easily accessible at the top of the browser window. Further, users can customize and

edit the menu at the front page, allowing them to individually define an unlimited number of direct URLs, also referred to as speed dials. Opera Mini emphasizes a user-friendly experience, and formatting technology has been used to avoid impractical horizontal scrolling of web pages. Recently Opera launched the Opera Mini 7 Smart Page. It enables a smartphone feel on basic feature phones (Interview with Opera’s business controller).

4.2 Combinations and interdependencies

Opera Mini is only relevant if used in combination with content on an operator network and on a device (see figure 2). The success of any web browser depends on the Internet for content that is interesting from a user perspective. The browser is simply the medium for accessing information, and without interesting content no one would need the features the browser provides.

It is in Opera’s interest to improve the way content is displayed and presented. Therefore, educating developers who create, design and provide content has been a priority. For example, Opera has worked to spread knowledge about web standards and the newest technology amongst students on campuses all over the world through their Education Program. Opera employees have attended and arranged various seminars and events for developers to encourage them to use the latest standards as well as test content on Opera platforms (Interview with Opera’s marketing manager). Because the formatting and availability of content

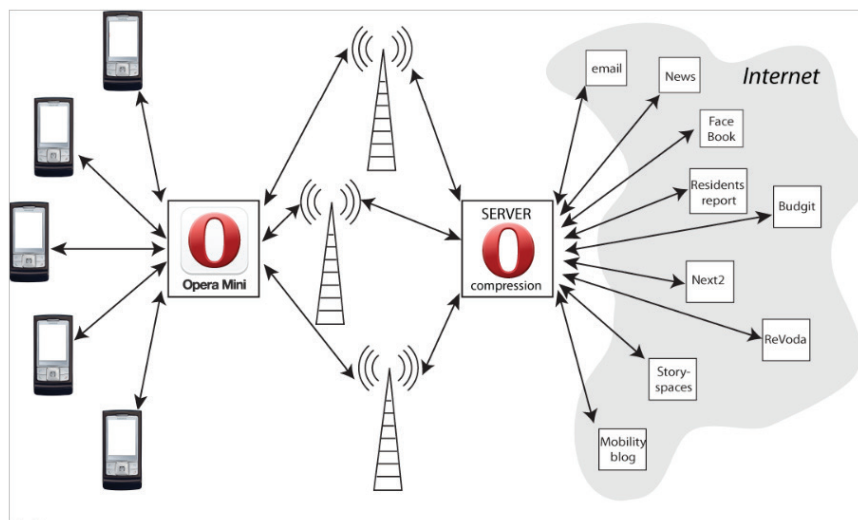


Figure 2: The structure of the mobile web in Nigeria and Opera’s role in it.

is fundamental, Opera benefits from an Internet with common, open standards and has been an active member of organizations working towards this as its chief goal, such as W3C and OMA (www.opera.com).

The use of Opera Mini also depends on infrastructure, and must be used in combination with a mobile operator’s network for accessing the Web. Cooperation and development of relationships with operators has been emphasized because they can influence the number of users that choose Opera Mini as their preferred web browser. Similarly, Opera Mini must be used with a device; a mobile phone handset. For obvious reasons the quality of the handset, the size, design and resolution of the screen display and the general usability of the phone will influence the experience associated with Opera Mini. It has been a priority to make Opera Mini compatible with as many handsets as possible, including basic feature phones. Further, cooperation with mobile OEMs and agreements about pre-installation of Opera Mini on the devices before they reach the end user, have been important for growth of the user base (Interviews with Opera’s former CTO, education manager and senior account executive).

The solution is activated whenever the end user intends to access Internet services or content. In this process, Opera Mini generates traffic on operators’ networks. And as it interacts directly with the end users, Opera is also in the position to influence the amount and type of data, services and web sites they choose to access or download (Interview with senior account executive).

The user base is Opera’s most important asset and forms the basis for Opera’s ability to establish commercial deals and generate revenue from its customers. Because Opera Mini is free, the paying customers are not the end users, but rather Opera’s partners. Therefore, the main priority is distribution and users first, establishing widespread activation of the solution, and then finding ways to monetize from them (Interviews with the former CTO and business controller).

4.3 Partners as part of distribution

The Opera Mini browser can be downloaded by the end user directly from Opera.com, from partners’ web sites or other third party online application stores, such as the iPhone App Store, Google Play, Blackberry App and Nokia’s Ovi Store.

Another important distribution source is pre-installation of Opera Mini on handsets developed and sold by mobile OEMs. Traditionally, OEMs have paid a license for offering Opera Mini as an integrated solution on their devices, but lately Opera has changed its focus from OEMs as a source of revenue towards OEMs as a key source of distribution. In the annual report for 2011 it was reported that 40% of all Opera Mini users were related to OEM pre-installations and distribution. Important OEM partners include companies like Nokia, Samsung and Huawei.

Opera Mini is either distributed as an Opera-branded, co-branded or operator-branded product. The co-branded version, typically branded as an operator-Opera product, is prioritized and represents an important source of revenue. The distribution of these various browser versions can be easily managed from the HQ through identification of end users’ IP addresses. When distributed as a co-branded product, Opera Mini also benefits from various forms of local marketing and PR activities carried out by the operator (Interview with senior account executive).

4.4 Partners as customers

Opera’s revenue stream, and its ability to monetize from end users, depends on partnerships, and particularly the number of deals signed with mobile operators. Opera’s focus has been to grow the user base on Opera Mini first. When there are adequate levels of user activity Opera will partner with mobile operators and convert the users into a co-branded version of Opera Mini as a way of generating license revenue. In August 2011, Opera signed a deal with AfriCom Group, including AfriCom Nigeria. Later the same year it signed a deal with YoungCom Nigeria. Both have implemented the co-branded version of Opera Mini. These two represent the main source of revenue for Opera in Nigeria (Annual report 2011, and interviews with Opera’s former CTO and business controller).

Operators benefit from cooperation with Opera because the data compression technology allows Opera to offer cheaper data plans, while keeping its margins. Further, in a co-branding partnership, the operators are given the opportunity to present their own portal services through Opera Mini. They will normally have three or four reserved speed dials where they can distribute content and promote services. These links represent strong distribution power, and have proven capable of more than doubling traffic to the selected sites. This helps operators increase the average revenue per user (ARPU), and that is one of the key selling points when promoting Opera Mini (Interview with senior account executive).

In addition to mobile operators, Opera has also entered a partnership with Google and earns revenue from displaying and promoting the Google search bar. Search revenue is generated every time an end user conducts a search through Google (Annual report 2011, and interview with former CTO).

Table 1: Summary of important aspects of the solution

Features	Combinations	Priorities
Data compression	Content	Open standards, W3C, OMA
High speed on unstable networks		Educating developers
Low-weight/ memory capacity		Advertising revenue Opera Mobile Store
Compatible with >3000 handsets	Network/access	Partnerships with mobile operators, licensing revenue from co-branding
User friendly interface	Devices and handsets	Partnerships with mobile OEM’s, distribution through pre-installation
Smart phone feel		
Speed Dials/ direct links		
Google search bar		
Load multiple web pages		

4.5 Other sources of revenue

Opera is increasingly focusing on advertisement as a future source of revenue. According to the former CTO, the mobile advertisement market is currently underdeveloped, mainly due to the difficulties of converting ad impressions into transactions. But at Opera the development of the market has been perceived as appealing for a while, and in 2010 the company bought the ad mediator AdMarvel. Revenue from advertisements is based on impressions or clicks (Interview with former CTO).

Opera has also launched its own Mobile Store, and expects to generate revenue directly from the end users through downloads of various applications. The app store was the 5th largest in the world in February 2012, and offered more than 55,000 free or pay-to-download applications.

5. The specific context of the case: Nigeria

The wild, wild West. Anarchy put into system. A cultural mega bomb with an energy for business that knows no limits.

The descriptions of Nigeria are colourful. The country has been described as extremely complex, maybe the most complex nation in Africa. It is the most populated nation in Africa and as diverse as a continent. Rich from oil and with more than 165 million inhabitants, Nigeria has been described as the prime economic engine of the entire African continent. Nigeria is also a country of vast differences. There are 250 languages and 400 dialects, numerous tribes and people groups, conflicts and deep social inequalities. The dominating ethnic groups, Yoruba, Hausa and Ibo, are very large and comprise many millions. In geographical terms diversity is also present with the Sahara desert and the Sahel in the north, to the savannah, tropical rain forest, swamp, and the Atlantic coast in the southwest (Interviews with Opera's project leader, Kristiansen and Rønning).

The social inequalities and differences create unrest. On the surface the conflict appears religious, but underneath there is a social conflict that is neither simple nor streamlined. Differences between the north and the south have torn the nation for decades, and are related to natural resources and the status of people groups. The coastline with the Niger Delta is in the southwestern region and is known for its extractive industries in oil and gas. The north is inland, partially desert, but people here have had the privilege of controlling the army. A power balance between the south and the north has been an issue for a long time and Chi Nwosu (project leader in Nigeria) finds that Nigerians never have had a sense of unification or nation building. Nigerians are known for engaging in fellowship from a social standpoint. There is brotherhood, not nationhood. It is more important to take care of oneself, the family and the tribe (Interviews with Opera's project leader, Kristiansen and Adegboye).

5.1 Infrastructure

In terms of infrastructure, the heavily populated country is experiencing underdevelopment and instability in many forms. The electrical grid has been poorly maintained, meaning that each household must acquire a generator to secure a reliable supply. The same goes for sewage and water. The government has not delivered on its obligations and is perceived to be largely corrupt. Although the government spends almost 40% of the GDP, according to Chi Nwosu, it has relatively little to show for it in terms of benefits to taxpayers. The only exception is subsidized

fuel (Interviews with Opera's project leader and Kristiansen).

5.2 Growth and employment

In Africa, Nigeria was amongst the 10 nations with the highest growth of GDP during 2010 and 2011. According to the African Development Bank (2012), Nigeria's economic growth was robust in 2011. While being dominated by its extractive industries, growth was mainly driven by non-oil sectors such as telecommunications, construction, wholesale and retail, hotel and restaurant services, manufacturing and agriculture. But despite economic growth, poverty is widespread. Unemployment rates rose from 21.1% in 2010 to 23.9% in 2011 (IMF 2012), and are especially high amongst the young: 37.7% of 15-24 year olds are outside the labour market; one of the highest unemployment rates in sub-Saharan Africa. Social indicators in health and education also remain weak (African Development Bank 2012).

5.3 ICT and Mobile networks in Nigeria

The mobile phone in Africa is a wonderful story. What Africa needed was to jump over all the traditional ICT stages and go straight to the latest one. (Interview Kristiansen)

The majority of African nations have never been spoiled with infrastructure, regardless of category. Fixed phone lines have been weakly deployed. And with regards to ICT infrastructure, statistics from 2011 still showed single digit percentage numbers for Internet and mobile broadband penetration. Mobile broadband had reached a penetration of 4% and less than 1% of the population was served with fixed broadband (ITU 2011). Still, much can happen within the ICT sector in the near future. With large mobile operators such as AfriCom and Crosscom, and with China's activities on the African continent, things point in the direction of acceleration.

The GSM network was introduced to Nigeria in 2001 with 400,000 lines (subscriptions or phone cards). By 2011 this number had grown to more than 100 million lines. This makes Nigeria the largest and fastest growing telecom market in Africa, and one of the top ten fastest growing worldwide. Leading national operators are AfriCom, Airtel, YoungCom, Globacom, Starcomms, Mtel, Visafone, Zoommobile and Multilinks (Interview with Longe, Nigerian Times 2011).

Several individuals have two or three phone lines, so say probably 40-60 million of Nigerians have access to a mobile phone. That means there are still about 100 million Nigerians who don't have a phone. There is still much room for growth. (Interview with Longe)

The lack of a fixed infrastructure in Nigeria makes the mobile network all the more significant. Mobile is the default mode of communication, and also the sole point of Internet access for many (Interview with Adegboye). Mobile phones can be affordably purchased compared to a laptop, and at a wide price range. A basic phone is priced at about 12 USD (1800 NGN), and those with Internet browsing capabilities start at 30 USD (4500 NGN). Mobile handsets have become readily available to the large middleclass (Interviews with Oyetimein and Chi Nwosu).

Recently, in June 2012, the four major operators in Nigeria were fined by the Nigerian Communications Commission (NCC) for poor quality of service.

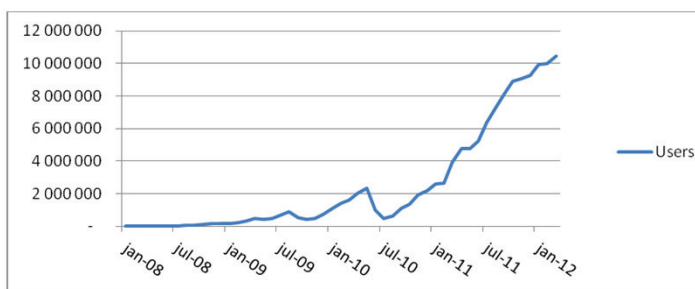


Figure 3: Growth of Opera Mini users in Nigeria, from 2008-2012

5.4 Cybercrime

Nigeria is heavily associated with letter scams, so-called 419 letters. These scams and criminal online activity are stopping legitimate Nigerians from engaging in international trade. PayPal, for instance, has blocked the whole nation. The account used in London by Co-founder of CcHUB, Femi Longe, was blocked in Nigeria without explanation:

Imagine stopping 160 million people from engaging in buying and selling on the Internet because they happen to be located in a specific country. That's apartheid if you ask me (Interview with Longe).

Several respondents claim the stigma of Nigeria as a nation of cybercriminals is old and fading. They recognize criminals are there, but argue that in recent times there has been a trend towards using mobile technology for good ends. Besides, Nigerians are taking active measures to stop letter scamming. The crowd-sourced repository Wayopedia (Wayopedia.org) is currently being developed by a team of developers at the CcHUB in Lagos and has been designed to detect and prevent email scams (Interviews with Adegboye and Longe).

6. The growth of Opera Mini in Nigeria

6.1 User growth first

I wish I could say that we had a long-term and systematic plan prior to entering a market like Africa, but it was not exactly like that. (Interview with former CTO)

Opera had developed Opera Mini, a product that could be used on networks with low or variable quality and capacity, and was able to provide a better user experience compared to other solutions on the market. The former CTO at Opera explains that when Opera Mini was first released in Norway in 2005, it achieved moderate success with a few thousand downloads. In 2006, it was released globally and grew slowly but steadily for a while. Then it suddenly exploded in such geographical areas as Russia and Indonesia, and later Nigeria and other emerging markets. Employees at the HQ describe the uptake and growth in these emerging markets as surprising because Opera had no employees working in these areas, nor any marketing campaigns or other activities directed towards these users. In fact, these potential markets were not even on the radar at the time; Opera had its hands full elsewhere. The US was a particular area of focus and investments, and resources were poured into this region. But it proved difficult to gain a strong foothold there. All the strong competitors, Chrome, Safari, Internet Explorer and Mozilla, were located like pearls on a string along

the US West Coast from Canada in the north to Mexico in the south, making it difficult for Opera to enter. Success evolved more naturally in other parts of the world, in regions where competitors had no technologically suitable solution or local presence (Interview with former CTO).

In 2008 (SMW 2009/01), Opera discovered something spectacular was going on in Africa without having lifted a finger to achieve it. Nigeria stood out:

At one point we heard about a guy in Nigeria who had opened a local store, offering people Internet on their phone for one dollar. All he did was download and install Opera Mini. We knew something was going on! (Interview with former CTO)

A few Nigerian users had already discovered Opera Mini back in 2006, but in 2008 the number of monthly active users began growing rapidly, from 10,684 in January to 189,000 a year later. In January 2010, more than one million users were registered (Opera user statistics – See figure 4). Similar growth was seen earlier in Indonesia, and the former CTO explained how Opera could now make use of their experiences from that region:

We knew what to do. When it took off in Indonesia, we immediately hired staff dedicated to the development of the area, and immediately started to identify mobile operators and opportunities for doing business. And, because Opera Mini had become immensely popular, partnerships and commercial deals could be established quite rapidly. We did the same in Africa! This method of user growth first, and then business development, has become one of Opera's most powerful business models. It means to first establish a consumer product with many dedicated users and then seek potential partners who are already doing business based on these users, proposing: Why don't we do something together? (Interview with former CTO)

Several factors were mentioned by Opera employees as contributory to the unexpected uptake and popularity of Opera Mini in Nigeria. First, a partnership with Nokia dating back to 1999 (Interview with former CTO) resulted in an agreement in 2006 about pre-installing Opera Mini on their high volume Series 40 (Annual Report 2006) and Series 60 handsets. Completely out of Opera's control, these phones were distributed in Nigeria and other African nations, and as of 2008 Opera began registering Opera Mini users on these handsets (SMW 2008/09). Opera could monitor this data as it is registered on its servers (Interview with Business Controller Opera). With Opera Mini pre-installed as Nokia's default browser, the ability to activate Opera Mini was easily available for end users. Based on numbers from Opera's SMW report from September 2008, it seems evident that Opera Mini was particularly popular when used in combination with S40 and S60 Nokia phones.

The second factor driving user activity in Nigeria is associated with the illegal hacking of the browser, particularly in 2010 and 2011. According to Opera employees, some Nigerians found technical loopholes in the system that allowed them to browse

Table 2: List of the top 10 handsets used for accessing Opera Mini in Nigeria, September 2008 (SMW 2008/09).

No	Handset	Series	No	Handset	Series
1	Nokia 311c	S40	6	Nokia 3230	S60
2	Sony Ericsson K750i	N/A	7	Nokia 6300	S40
3	Nokia 2626	S40	8	Nokia 5200	S40
4	Nokia 6070	S40	9	Nokia 2600c	S40
5	Nokia N70	S60	10	Nokia 2630	S40

for free. This was apparently very easy to do, and Opera Mini quickly became extremely popular. Usage boomed, but local operators were not pleased as they were losing profits, and Opera found ways to stop the exploitation (Interviews with business controller and CTO). It is uncertain exactly how influential this has been for long-term user growth. Opera's statistics show that when the technical loophole was closed the number of users immediately dropped, but soon recovered. Some employees explain the loophole as important, and argue that the users had gotten acquainted with the browser (Interview with business controller). Others, such as the former CTO, are of the opinion that this has been a neutral factor over time, that booming growth would happen anyway, and that the hacking just made the graphs more volatile. He adds that the exploitation of operators' networks through Opera Mini has been a more pronounced problem in Nigeria than other regions (Interview with former CTO).

Third, the emergence of social online networks is pointed to as a possible influential factor. The former CTO explains that his impression is that Facebook, Opera Mini and several other service providers simultaneously diffused and gained popularity. Because Facebook was dependent on a carrier, and Opera Mini was dependent on content and services, the two are seen as complementary. It is believed that they mutually reinforced the usage and diffusion of each other (Interview with former CTO).

A fourth factor points to the fact that mobile phones became relatively cheap and that mobile infrastructure had improved as a result of Chinese actors in Nigeria. Lately, they have subsidized construction of mobile towers and distributed cheap handsets as a part of their strategy to acquire resource extraction rights. The mobile handset producer, Huawei, is mentioned as influential. This is a complex value chain that contributes to favourable conditions for mobile services, such as Opera Mini (Interview with former CTO).

The last and most important factor mentioned by Opera managers in determining user growth is the unique technology behind Opera Mini. It is strongly believed that the compression feature that helps users save up to 90% on data traffic and improves speed has created a strong word of mouth effect (Interviews with former CTO, education manager and marketing manager):

I believe Opera became big in Nigeria independently of what Opera employees did to systematically grow that market. Opera Mini became a success because it is a fantastic product, and because there is a good fit with the market characteristics in Nigeria. Opera succeeded because of the product, not because Opera implemented a clever market strategy. (Interview with former CTO)

We will come back to this statement in the discussion of the case.

6.2 Business development, staff allocation and early work in the region

When user growth was recognized as substantial and interesting in Nigeria, a handful of people within sales and marketing were allocated to the development of this region. There already were employees at the office with experience from Africa, and they could now make use of their aptitude and network in the region (Interview with former CTO). In the beginning, employees dedicated to the African markets were located at the HQ, but later Opera could also recruit employees locally.

Early work in the region focused on establishing deals and partnerships. The former CTO explains that to be able to gen-

erate revenue from the rapidly growing Opera Mini user base, Opera had to develop relationships, and eventually partnerships, with mobile operators in the region. A Scandinavian based in South Africa was hired in January 2011 to focus on sales in the Middle East and Africa. He initiated several new deals in Africa, but left after only one year. Today, Africa is the place with the highest concentration of new Opera deals in the world, and the Scandinavian was replaced by a local person to keep the heat up in these markets (Interviews with former CTO and education manager).

The senior account executive at Opera, responsible for two global operator agreements, explains that signing an operator deal can take from one to three years. If it is a group deal the process can be especially lengthy, as those deals are more complex, include more stakeholders and numerous other aspects that need to be considered before a deal can be signed.

In Africa, the major mobile operator, AfriCom Group, was interesting as a potential partner, being one of the largest operators on the continent, with operations in 21 African and Middle East countries and more than 150 million subscribers. An agreement with the AfriCom Group about offering the co-branded Opera Mini browser was signed in August 2011, including the Nigerian AfriCom subsidiary. The senior account executive explains how this deal came about:

In this specific case we actually signed a deal with the AfriCom South Africa subsidiary first, in December 2010. This partnership turned out to be a success, creating hype internally in the organization. We had a parallel dialogue with the group before we launched with South Africa, but this was the trigger needed to progress with the group deal.

When there were enough users and revenue to support it, the deal with AfriCom Group was signed and several new employees were hired (Interview with business controller). Shortly after the AfriCom Group had signed, Opera, in the fourth quarter of 2011, signed a deal with YoungCom Nigeria (Interviews with education manager, PR and communication manager, and market coordinator).

Both the senior account executive and the marketing manager pointed to the fact that, though a global frame agreement was signed with an operator group, there is no automatic implementation of this agreement by the subsidiaries. But there is a mandate from the group that cooperation is favoured. The structure of the deal, and consequently the revenue potential, are based on the number of end users of the co-branded browser. Therefore, the team of people dedicated to the African market work to make sure the agreement is operationalized.

The account team develops deployment plans, technical and practical plans describing how to introduce the co-branded version of Opera Mini, and the education manager sets up a go-to-market package and assists the partners in marketing the solution. The Norwegian managers travel extensively to meet with product managers and marketing representatives in these companies. Often specialists from various parts of the organization and the colleagues on the ground are also consulted (Interviews with senior account manager and the education manager).

The education manager's main responsibility is to assist the operators in growing the user base and data traffic on the browser. She describes her role interacting with partners in Nigeria as a type of consultant, and spends her time advising partners on how to best market Opera Mini. Important activities include suggesting new tactical strategies or marketing campaigns, and advising on how to grow mobile internet penetration in general. She emphasizes the importance of finding ways of aligning their goals

with the partners' priorities. But, it can be challenging at times:

You really have to be aware of your position. We're not there to demand anything from the partners, we are there to make their job of making the Opera Mini co-branded project a success as easy as possible.

...we have to come up with other ideas. I think we have to keep in mind that we always have to provide value. Opera Mini is just a part of their portfolio and there are other projects that might take priority at times. So what we do is that we try to stay relevant. We can provide useful research, in terms of who the users are, or we can come up with some interesting strategies that they hadn't thought about. And, we understand that they will get back to us when the time is right for them, which is not always immediately. If we keep pushing too much it is bad for the relationship. (Interview with education manager)

The group deals regarding establishing common goals with partners are particularly important. When Opera has secured buy-in from the group, the local Op-Cos will automatically have incentives to invest in marketing and promotion of Opera Mini. Still, it often requires huge amounts of time and effort to make partners implement recommended campaigns; it can take six months or even a year. But when it eventually goes live in the market it can be highly valuable. A recent example from one of the African group partnerships is:

The AfriCom Group is currently running a campaign where they promote a co-branded version of Opera Mini, It runs on CNN and MTV and all sorts of TV and radio channels. This is the result of one of our marketing plans that were defined in September last year. It has slowly materialized. (Interview with senior account executive)

The partner marketing initiative is not only focused on how to promote the product, it is also about advising the partners on how to package and price the solution. In certain African countries data pricing is still very high, which hinders mass-market adoption. This is the case in a lot of markets worldwide, and the partner marketing department strives to share good case studies from markets that have adopted affordable and successful pricing strategies. A data plan or data package could imply that the operator offers, for example, 100 MB of data traffic, 100 SMS and 100 minutes of calls or limitless browsing monthly at a fixed price. Nigeria is a market with much potential regarding implementation of data packages. Opera's experience is that strategic pricing is essential to increase penetration, and operators in developing regions are often interested in exploring these possibilities. The Opera partner marketing team attempts to accelerate this process by discussing the operators' current pricing strategies and suggesting adjustments based on successful case studies in other markets:

I always focus a lot on suggesting these data packages, and I see that they often get picked up quite quickly. It helps that we can provide examples from other markets with similar situations and shows the success of pricing strategies there. I believe that this is often perceived as very valuable input, especially when the operator is only beginning to discover the possibilities of growing their mobile Internet user base. (Interview with education manager)

Through offering dedicated data packages, meaning that the data package is only valid when used with the Operator-Opera Mini browser, the operators can lower their prices, keep their margins and increase the number of users. This is good for the operators because both traffic and revenue increase. It is good for Opera because license revenue increases with the number of users, and for the users it means better and cheaper access to the

Internet. This is only one example of the pricing strategies that Opera proposes for its partners (Interview with senior account manager, education manager and marketing manager).

The former CTO explains that he believes Opera's business model is strong when it comes to establishing operator deals, but that it is hard to monetize directly from users. This particularly applies to emerging markets like Nigeria, but it is also widely known in the industry that monetizing directly from users is a challenge in any market. Still, the users are what make Opera interesting to business partners, and therefore it is always about users first. Finding ways to monetize and generate business comes second.

The cooperation between Opera and its partners in Nigeria offers several practical and cultural challenges to overcome. First, it is geographically distant from the HQ and since Opera does not have an office in the region a lot of travelling is required to ensure smooth implementation of technical and marketing solutions. Very often the operators require considerable support and guidance, which is provided through the Partner Marketing program. Opera managers sometimes travel more than 40 hours just for one meeting! Another natural consequence of the distance is that local knowledge is limited at the HQ and cultural issues can arise in the interface between employees at Opera and partners in Nigeria (Interviews with senior account manager and education manager).

The environment in general is tougher in Nigeria: In Nigeria life is just tougher. It's a culture where you have to be strong to make it! It's an environment where nothing comes easy. Electricity is unstable and traffic in Lagos is hell, which makes everyday life much more difficult. You really have to be a strong person to succeed. It's not a quiet culture. And of course that translates into business as well. It's very straightforward, (Interview with education manager)

The operators are very different. Doing business with an established operator that has been in the market for a long time is very different from working with a younger and smaller company. It also depends on their target audience. An operator that targets the youth market is going to respond to ideas differently than an operator that targets a broader group of the population (Interview with education manager).

6.3 Creating personal relationships

Creating personal relationships is seen as important for the success of partnerships with operators. Previously Opera found that it signed deals in many countries, but implementation of the deals proved difficult. Companies were interested, signed the deal, and the product was launched, but often other projects took priority. The operator saw the need for the product, but they needed to be supported, engaged and inspired. This was the backdrop for the creation of the partner marketing department more than three years ago (Interviews with education manager and marketing manager).

Meeting in person makes it easier to convey certain difficult technical or marketing solutions, and Opera employees get a better sense of the local market conditions. The tone and relationships with different contacts vary; often there is an informal tone, but it is important to adapt to the situation:

You can sense how valued you are. There are people you feel very comfortable to contact on Skype, for example, just to bounce ideas back and forth, and in other cases the relationship is more formal. You simply adapt your communication style to the type of relationship that you have with the partner. It's about

awareness and common sense, really. (Interviews education manager, marketing manager)

When working with a partner on a campaign there is often frequent contact between the manager and the contact person at the partner company, and the relationship develops. The relationship might be significantly strengthened, especially if the campaign is successful. But if the contact person moves on to another position, the relationship with the new contact has to be built from scratch (Interviews with education manager and marketing manager).

You work with individuals and it all depends on the relationship with that person. In the long term that means that you have to build relationships over and over again, and you have to make yourself relevant over and over again to different people.

6.4 Knowledge sharing and learning

Opera provides its partners with a lot of information and data. In particular, it collects and provides statistics from Opera's servers, such as user reports, handsets used or the most popular web sites. These are highly valuable data for the operator who can use it for targeted promotion and as a means to better understand their users. In addition, because Opera works with many operators around the world, it can also share knowledge about strategies and tactics that have worked in other markets. The senior account executive explains that it has been a great advantage for him to work as an account manager for two major operator partners, as he can pick up best practices from one partner and implement them for the other partner. Opera does not share operator-specific intelligence with its competitors, but uses best practice sharing within group deployments to a great extent. By documenting success and learning from each marketing campaign and deployment plan, Opera can effectively share them with other operator companies within the groups. This has proved highly valuable for Opera's partners (Interviews with senior executive managers, education manager and marketing manager).

Opera also uses the operators' statistics, experience and knowledge about the user base to adapt and develop the product. The recent Opera Mini 7 Smart Page was created with emerging market users in mind. It is a product version that takes into consideration that Opera has many users in markets where feature phones are still widespread, such as Nigeria and Africa (Interview with education manager).

6.5 Opera in Nigeria - Playing the intermediary role

There is only one person operating out of Lagos for Opera. Four areas of particular focus are:

1. Attend local events and develop relationships with users and developers.
2. Work with local content providers, and enter partnerships to have local content available by default on Opera Mini.
3. Work with local OEMs, for example the regional Samsung office, and encourage them to push phones with Opera Mini pre-installed.
4. Build good relationships with mobile operator partners. They have big marketing budgets and the scope to do major campaigns on TV and radio. Encouraging them to promote the Opera Mini partnership is important, because it is good for the Opera brand to be associated with the big brands in local markets.

The person has an intermediary role and interacts greatly with

both Opera HQ and Opera's partners in Africa (Interview with market coordinator).

Although the market coordinator has no formal responsibility for sales, he gets involved in the partner deals from the very beginning, despite the fact that the deals can be very technical. With new deals it is important to build trust, and he describes his role in this setting as 'to manage cultural nuances'. By playing the intermediary role, he can step in and prevent misunderstandings and miscommunication or clean up if the deed is already done (Interview with market coordinator).

6.6 Building a local business network

From previous work and experience, the market coordinator was able to bring to the table a broad professional network in Kenya, South Africa and Ghana, in addition to his home country Nigeria. Despite the fact that his contact network was not primarily related to the ICT industry, he claims these contacts have been very valuable:

The market coordinator lists four arenas where he builds his professional network and at the same time can display a local presence for Opera. The two first arenas are online resources; (1) LinkedIn.com is used extensively for professional contacts, (he has more than 500 business contacts); (2) Twitter is another platform extensively used for similar purposes; on the ground in Lagos, (3) the CcHUB has been an important physical place to make contacts within the ICT industry; (4) technology events and conferences are important opportunities to network with content providers and nurture the relationship with developers and end users. He makes sure to attend as many events as possible and quickly counts participation at six events during the first five months of 2012: Mobile Web in South Africa, Conference on Mobile Web East Africa in Kenya, Conference on Mobile Web West Africa in Nigeria, AfriCom events in Nigeria and South Africa as well as a Safaricom event in Kenya (Interview with market coordinator).

6.7 Perceptions about the future

Nigeria is seen as an important market for Opera. It was the fourth largest nation in April 2012 in terms of Opera users worldwide, and is rapidly growing. In 2012, Opera had a goal of reaching 500 million monthly active users globally within a couple of years (nearly doubling their number of users), and therefore fast growth rates are even more interesting than the actual number of users. It is important to have local people on the ground that contribute with local knowledge and can pick up market trends quickly. It is especially valuable for Opera to have local employees attend partner meetings. And it can mean a lot for the users.

If you can give people Internet it is fantastic! When MIT for instance made the 100 dollar computer, we were supportive, but we knew that we could give people the entire Internet on their phones for free. What do you need a 100 dollar computer for then? We felt what we did for welfare was much greater than many other initiatives. And that felt good, it was a good fit with the company values and DNA. (Interview with former CTO)

But, in the end Opera must depend on making money. And several challenges are in the pipeline, namely increased competition and maintaining high levels of distribution. The old partner, Nokia, launched its own browser (Interview with business controller). Another challenge is the flow of Chinese mobile handsets into emerging markets. This is important for Opera

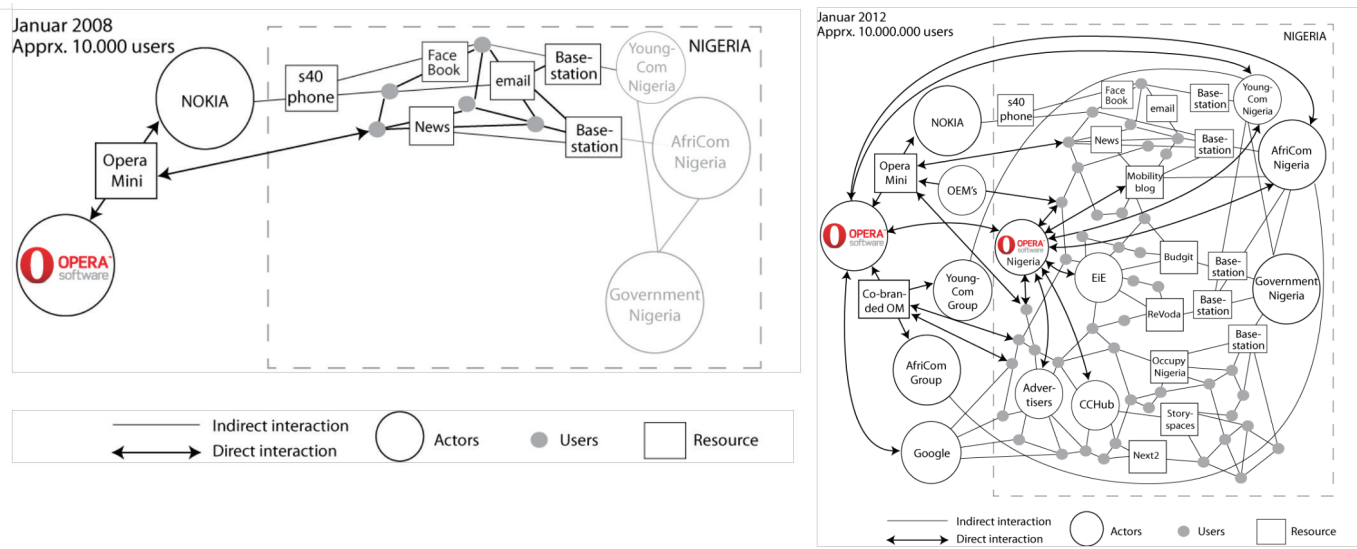


Figure 4: Development of Opera's network in Nigeria from 2008 – 2012, with Opera as the focal unit of analysis.

because it needs to make Opera Mini compatible with all these new handsets. There is a large grey market in Africa. In addition, there are Chinese companies that deliver browsers that are quite similar to the Opera Mini set up, some of which are growing their market shares in certain African countries, and Opera is closely following the development (Interview with senior account executive).

7. Analyzing three specific relationships

The case illustrates how Opera has pursued opportunities in Nigeria. More as a coincidence, rather than from strategically focused efforts, user activity began to rapidly emerge. Figure 4 illustrates how the network evolved in Nigeria from 2008 to 2012. Clearly, the network is much more complex than rendered in this graphical representation, but it serves as a simplified picture of how the network developed. During this period Opera became increasingly involved in various activities and relationships in Nigeria, and the network has become more organized and intertwined due to all systematic efforts.

Here we will analyze three different relationships within the case from a network perspective; each has been selected so that together they explain technical, economic and social dimensions. The three layers of the ARA model will be discussed, and dominating layers will be identified for each of the analyzed relationships.

7.1 Opera HQ ↔ Opera in Nigeria: The technical dimension

The relationship between the Opera HQ in Norway and Opera in Nigeria is heavy with actors, resources and activities on both sides. The relationship is mostly about coordinating and fine-tuning Opera's local presence, relevance and economic interests. In this section we will analyze in particular how the relationship came about and how it has developed by analyzing resource ties and constellations (see figure 5).

Opera in Nigeria is primarily represented by the technical solution Opera Mini, and it was initially made available online. Besides investing heavily in the Opera Mini and making it available for free, almost no activities or investments by the HQ were made to announce this to Nigerians. Resources and

activities were allocated and prioritized elsewhere. To the HQ's surprise, activation of the Opera Mini by users in Nigeria began to emerge, and escalate. The solution had been pre-installed on a number of Nokia phones, and out of Opera's control or without its knowledge, they were distributed across Africa. Nigerian users found Opera Mini useful; it was compatible with the equipment they already had available and gave them access to attractive Internet content and services. Furthermore, Opera Mini worked well with the existing infrastructure, improving efficiency and speed on local mobile networks. Because of reduced Internet costs, data traffic significantly increased as more people could now afford it. Opera Mini was quickly embedded and became part of the business landscape. To a large degree one can point to a surprisingly good initial fit between Opera Mini as a technical solution and the existing resource constellation.

It seems obvious that the technical dimensions related to the solution were significant to Opera's growth in Nigeria. But because of interdependencies in the network, the technical solution itself was not the only resource of importance. We will look deeper into three specific resource ties to understand more of the substance in the relationship; (A) investments by others in relation to the solution, (B) user activity in relation to mobile operator's revenue model and (C) HQ experience in relation to the 'new' co-branded Opera Mini (see figure 5).

Investments in technical equipment and infrastructure already made by others were fundamental for the existence of Opera's solution (A), and Opera could never have made these investments itself. The existing infrastructure created opportunities for Opera; its Opera Mini could run on top of and take advantage of the large investments made by others. Making Opera Mini

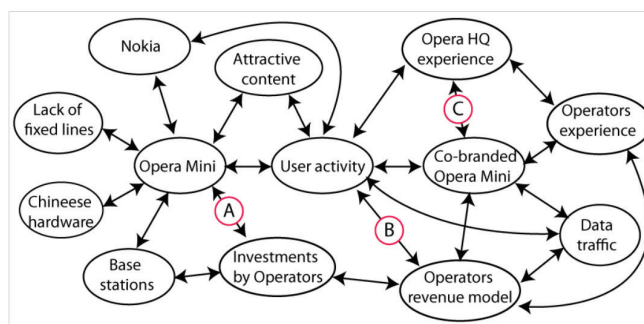


Figure 5: The resource constellation affecting Opera's solution in Nigeria.

available to users in Nigeria, therefore, required few resources from HQ. But a technical fit with the existing business landscape and high user activity were not enough to be of economic significance. Rather it was necessary for Opera to search for revenue opportunities within the constellation of resources. This process is characterized more by constraint. Because the investments in the network were made over a long period of time, and because of their scale, they enforced a certain amount of path dependency. The solution had to be adapted and modified to fit with the needs of local mobile operators. The co-branded Opera Mini, a ‘new’ solution with the capability of elegantly transferring existing users from the ‘old’ solution, was developed to fit the needs of both Opera and the mobile operators, enabling mutual economic benefits. This brings us to the next resource tie, user activity in relation to the operator’s revenue model (B). One can argue that the technical solution only serves to facilitate what can be seen as Opera’s actual solution – user activity. Data traffic generated by users is the core of the solution offered to Opera’s business partners – the mobile operators. Mobile operators face daily struggles to generate revenue from usage, and data traffic is becoming increasingly important. Therefore, user activity must be seen as an important business resource from a HQ perspective. One can then point to how the technical dimensions of the solution simply are fundamental pre-requisites for creating business and developing actor bonds and activity links to selected partners.

The third, and final, resource tie is the HQ’s experience as a resource in relation to the new co-branded solution (C). The operators do not have to partner with Opera; users of the solution will generate traffic on the operator’s network regardless. But together they can achieve increased use and make their respective resources more economically valuable. Opera HQ provides its partners with much experience and empirical evidence from other markets, as well as specialized knowledge and statistics. The introduction and modification of mobile data plans serves as an example of how this knowledge is used by partners. The HQ experience can be seen as a resource of both technical and more intangible character and is an integrated part of the co-branded solution. There is clearly a mutual adaptation and learning process, and consequently this resource tie is one that requires a great deal of interaction on the two other layers: activities and actors. Thus, it is one of the resource ties in which Opera invests the most time and effort.

Although tied together in a complex and interdependent constellation of resources, it is not obvious that all parties will value each resource tie on the same scale or have the same perspective on how resources best fit together. As a consequence, development and adaptation that has the potential to increase the accumulated value in the network may take a long time to be implemented or might never be implemented at all.

7.2 Opera ↔ Partners: The economic dimension

The relationship between Opera and its partners is dominated by interaction between actors. When technical embeddedness of the solution was established, Opera had to search for opportunities to create revenue streams. By providing the solution for free, it was still unsure how to transfer user activity into positive revenue streams. In this case, economic value was created from interaction and cooperation with other commercial actors in the market. This part of the analysis will deal with how revenue streams flow (see Figure 6) and how network interaction affects economic dimensions.

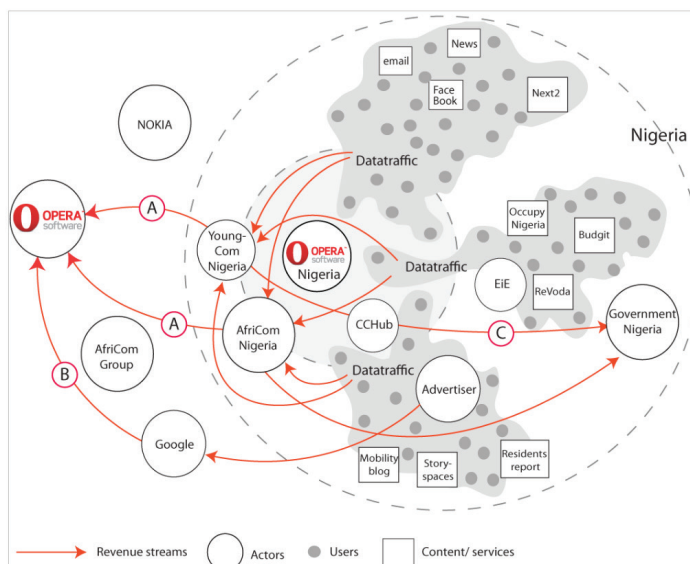


Figure 6: Revenue streams in Opera’s network in Nigeria in 2012.

There are currently two direct revenue opportunities for Opera in Nigeria; from partnerships with local mobile operators (A), and from advertisements through Google (B). The first generates the largest revenue stream and is particularly important. Because the operators can increase their own revenue streams by cooperating with Opera, the relationship brings about mutual benefits, and the overall goals of growing users and data traffic are largely aligned. But, because the relationships with the two mobile operators are relatively new (officially both have lasted less than a year at the time of the study) they contain some level of uncertainty. Opera employees explained how learning by doing is part of these actor bonds, and that building trust among individuals is critical for developing strong relationships and reaching economic goals. But as in most firms, employees come and go at both Opera and the partners’ organizations. If bonds with individuals are crucial, turnover of employees may cause serious stress to the actor bonds. So, what effect will this have on the relationship? Can it offset the relationship as a whole? In some cases maybe, but if that were the typical pattern, there would not be many partnerships or collaborative efforts in business. In this case, the breach of an individual actor bond causes some delay or may slow down progress temporarily, but due to a number of individual actor bonds among the partners, the relationship as a whole is relatively unaffected. It is the individual actors’ collective efforts that define the relationship and facilitate the revenue streams in the network. In addition, activity links and resource ties further contribute to stabilizing the relationship.

This does not mean that interaction between individual actors is of marginal importance. The process of adapting and growing the solution together, creating mutual value and a shared perception of success, makes the relationship more interdependent and stable. In this case it seems beneficial to facilitate for more frequent interaction by moving actors closer together. For example, the physical location of Opera employees, close to the partners’ offices, allows for new forms of activities, communication and cooperation, and a deeper understanding of cultural and contextual factors.

However, the revenue stream does not depend only on the bond between Opera and the mobile operators. The operators themselves are dependent on other actors, particularly on a license controlled by the Nigerian government. As such, their relationship with the government will indirectly affect the po-

tential revenue streams directed towards Opera in this market. But, in turn the government is dependent on cooperation if it wishes to maintain and increase the license income (C), while simultaneously making basic goods available to the general public. This interdependence makes the network more stable than at first glance, and threats from the government about closing down base stations are not overwhelmingly credible.

Opera also seeks to generate revenue from advertising through its browser start page and the Google search bar, but this revenue stream is more difficult to stabilize. One reason could be contextual factors; whereas the mobile industry was somewhat developed at Opera's point of entry, mobile advertisement has only recently begun to emerge. It is reasonable to assume that Opera can have an impact on the direction of this development by taking an active role, interacting with related actors early on and influencing the web of actors. Presumably, it will take time to develop the network and find a strategic place in it, and it will coevolve with the choices and decisions by others. Again, it will be a matter of learning, trial and testing.

7.3 Opera in Nigeria \longleftrightarrow Users: The social dimension

Finally, we will discuss the relationship between Opera in Nigeria and the users. Although consumers are not normally included in the IMP business network analysis, we find it relevant for this case. Activities by users are of fundamental importance because it creates commercial business opportunities for Opera. One can argue that the users in fact 'produce' and 'supply' activities and data traffic for Opera. From a conceptual point of view users can therefore be seen as suppliers, collectively supplying a key business resource. The relationship between Opera and users is dominated by the activity layer, and we will look specifically into social dimensions of the activity patterns of the case.

Opera in Nigeria, particularly represented by the solution, has become an integrated part of users' activity patterns. Apparently, there is a good fit between the technical features of the solution and the Nigerian context. Initially, uptake and diffusion were enabled by users who needed to communicate more, with greater cost efficiency and over larger distances. Being able to contact and communicate easily with friends and family were basic social needs and activity links have become particularly important with regards to social media platforms.

The growth and gradual development of commercial and institutional networks has emerged alongside social networks, although this development seems more challenging and uncertain. As of now, young technology entrepreneurs are taking advantage of the solution, particularly for political purposes. Social media has brought increased transparency and political awareness. It is interesting to observe that when the solution has become embedded in the existing activity pattern it seems to accelerate user activity and development of networks. Hence, it contributes to exponential growth of the value created and supplied in the network from a business perspective.

A number of activities are also performed by Opera as an actor. Local presence and direct online communication with users were emphasized. The solution has constantly been improved and updated based on user feedback and interaction. Activities related to supporting development of local content, as well as influencing data packages offered by the operators, has strengthened the relationship between Opera in Nigeria and users. The relationship is highly interdependent; Opera is dependent on the supply of activities and the mobile web has become an integrated part of users' daily lives. Adaptations made to improve the

social dimensions of user activity made the solution even more relevant and embedded in the local web of actors, resources and activities.

8. Crucial network features

This case is a very rich network case, i.e. it describes the importance and the function of direct connections for a business highly embedded into a business environment. We all know that people have personal connections and this case is just another example of that. But this case shows much more. All the existing business relationships in the case are also directly connected to other business relationships. What Opera is doing with Nokia in Finland influences what it can do in Nigeria or other parts of the world. This is due to the fact that products and technical solutions are highly interrelated – embedded into each other. The use of the mobile phone is dependent on the possibilities of reaching the internet and the latter is dependent on both technical solutions and content sources. In this way Opera is related to mobile operators as well as content providers such as Facebook. These direct connections give two different types of possibilities or restrictions for involved companies. First, it results in a specific network structure in each moment, which in the short run makes room for certain networking processes to exploit the given structure at the same time it excludes others. Opera is actively trying to do this in Nigeria through its marketing activities as well as undertaking complementary activities in some other countries. However, second, it also makes room for a certain number of networking processes trying to exploit changes in the specific structure. This is also a track followed by Opera, for example in the development of Opera Mini, where the company is trying to develop a new way to reach the internet from mobile phones. Together these two types of networking processes create some room for each of the involved companies to manoeuvre while simultaneously creating very distinct restrictions. Any actor must constantly adapt to the existing structure as well as continuously deciding what changes to support. If finding a positive solution, as Opera has done with the Opera Mini, it can quickly improve its position and if less successful, it can quickly go in a negative direction.

The case is also interesting as it offers possibilities for identifying the main reason for the existence of these direct connections. The resources used and developed are all systematically interrelated and embedded. The reason is that more or less all of them are 'heterogeneous' from an economic point of view, which means that their value is dependent on the resources with which they are combined. The value of the web browser is directly dependent on the features of the mobile phones as well as the development of Facebook. In the same way the characteristics of the Opera Mini were, as the former CTO explains, also a consequence of Opera's existing resources. The heterogeneity offers a large number of possibilities for developing single products or facilities to increase their value. This is also one main activity in which all the involved companies take part. One consequence is that the actors develop the resources by designing specific interfaces with other resources; the resources become more or less embedded into each other. They become more productive in certain combinations and this creates a specific structure in terms of value creation. The technical solutions, such as a product like Opera Mini, are not just "fantastic" in general as the CEO claimed, but it was "fantastic" in relation to the features of some of the existing resources. If these had developed differently, which perfectly well could have happened, the result

would have been quite different.

It is important to note that this does not only regard technical resources. The interface between technical and social as well as the interfaces between social resources can be developed in the same way (Baraldi & Strömsten 2006). This is also what Opera tries to work with in Nigeria in a general sense. The company is trying to become more closely connected to important dimensions of the Nigerian society.

Consequently, resources are never developed in a neutral way in relation to other resources. They will always be developed in relation to each other – some in a positive and others in a negative way. This is the case for products such as the web browser and mobile phones as well as the web browser and Facebook. As a result, the involved companies develop in relation to each other, while some get closer, others move in opposite directions. Opera Software and the mobile operators in Nigeria move closer toward each other while Opera and Nokia have a more problematic development – some parts getting closer and some parts going in different directions (Nokia developing its own web browser).

These connections can be used over time as when Opera earlier learnt about connections in Indonesia and later uses this knowledge in Africa. The connections can also be used in relation to place; what Opera learns about connections in South Africa is connected to and affects the development in Nigeria,

The case is especially interesting in terms of how a network affects the distribution of wealth in relation to economic returns. All relationships and the value creation they represent can not be transformed into money! The end users of the web browser are not paying for using it. Opera had many users in Nigeria before the company made any money from that, and then did so indirectly. Connections between end users and mobile operators could help Opera gain revenue from the operators. It means that in many ways the money-making relationships are dependent on other relationships that are not money producers.

This specific structure and how it affects the chance to make money points to an extremely important feature of all (?) networks. The division or distribution of monetary rewards is not directly related to value creation. There are two different processes taking place at the same time. One is the value creation and the other is the division of rewards. These processes are probably related, but in a much more complicated way than we usually assume. It is an aspect of the networks that up to now we have neglected in our studies.

9. Conclusions

From a strategic point of view the case gives reasons for some specific conclusions. Succeeding in Africa has been a troubled goal and difficult journey for many western companies, but in the case of Opera Software it initially came more or less unintentionally. We described the growth of Opera in Nigeria, and from the analysis of the empirical data it seems clear that the main explanation builds on the characteristics of the network. It is not single events or single individuals that have been successful but some important network factors:

(1) Fit with the old: The strong initial adoption and growth of the solution in Nigeria can be accredited to its excellent fit with existing networks in terms of technical resources, investments made by others and social needs of users, rather than Opera's role as an active business actor or its strategic plans. Embeddedness within the existing resource constellation in Nigeria facilitated for a larger, more complex business network and rein-

forced future growth and development.

(2) Interacting factors: The story of Opera in Nigeria illustrates how growth strategies cannot be determined or controlled by individual business actors, but that much of the important factors for growth of innovations are co-created in networks of interrelated resources, actors and activities. The ability to both act on and react to events and processes in the network becomes particularly important.

(3) Economic exploitation: Embeddedness and a good fit within the user context was not enough for an economically interesting innovation or exploiting the opportunity. Opera also had to find a position within the existing business network to turn users into profit. The main feature of the network is that all actors are dependent on each other if they seek to increase their individual revenue streams. The accumulated value is greater when working together.

Time Magazine asked if the small browser company was crazy to give out their product for free. But by doing so, Opera could pursue alternative innovation paths and explore opportunities impossible to foresee or plan in detail.

Finally and in summary, this business case is rather special from an IMP point of view as it deals with a business situation where

- no physical product is exchanged
- distribution is electronic rather than physical
- the product is given for free and someone else than the user has to pay
- the crucial role of end-users/consumers
- the value creation process is different from the division of rewards process.

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Overview of Interviews

No.	Date	Duration (min)	Collection method	Data processing	A4 pages of data material	Language	No. of respondents	Who	Position
1	20.03.2012	90	Interview, HQ	Notes	1	Nor	1	Opera employee	HR specialist, Opera
2	29.03.2012	50	Skype Interview	Notes	2	Eng	1	Opera employee	Consumer Marketing, Middle East and Arabic Speaking Countries, Opera
3	30.03.2012	50	Skype Interview	Notes	6	Eng	1	Opera employee	Market Coordinator, Sub-Saharan Africa, Opera
4	03.04.2012	40	Skype Interview	Notes	2	Eng	1	Opera employee	PR and Communications, Opera
5	12.04.2012	10	Skype Interview	Notes	1	Eng	1	Opera employee	Market Coordinator, Sub-Saharan Africa, Opera
6	04.05.2012	110	Interview, Opera HQ	Transcribed	17	Eng	2	Opera employees (x2 with same title)	Partner Marketing Manager, Africa and Middle East, Opera
7	07.05.2012	80	Interview, NRK	Transcribed	7	Nor	1	Tomm Kristiansen	Former foreign reporter in Africa, NRK
8	08.05.2012	180	Interview, Holmlia Kulturhus	Transcribed	19	Eng	1	Elvis Chi Nwosu	Project leader: African Cultural Awareness. Originally from Nigeria
9	14.05.2012	60	Interview, UiO	Transcribed	9	Nor	1	Helge Rønning	Professor in "Medier og Kommunikasjon" at UiO
10	23.05.2012	53	Skype Interview	Transcribed	8	Eng	1	Yomi Adegboye	Tech Blogger and Entrepreneur. Founder of www.mobility.com.ng
11	23.05.2012	64	Skype Interview	Transcribed	8	Eng	1	Pelumi Oyetimein	Student at Yaba College of Technology, Lagos. Opera Volunteer
12	24.05.2012	60	Interview, Opera HQ	Notes	2	Eng	1	Opera employee	Business Controller, Opera
13	31.05.2012	45	Interview, Opera HQ	Transcribed	12	Eng	1	Opera employee	Partner Marketing Manager, Africa and Middle East
14	01.06.2012	104	Skype Interview	Transcribed	13	Eng	1	Emeka Azuka Okoye	CEO Vikanti, Creator of ReVoda
15	04.06.2012	40	Skype Interview	Transcribed	8	Eng	1	Femi Longe	CEO, Co-Creation Hub Nigeria
16	05.06.2012	102	Skype Interview	Transcribed	16	Eng	1	Opera employee	Market Coordinator, Sub-Saharan Africa, Opera

No.	Date	Duration (min)	Collection method	Data processing	A4 pages of data material	Language	No. of respondents	Who	Position
17	06.06.2012	58	Interview, Waynes Vika	Transcribed	14	Nor	1	Opera employee	Previous_CTO, Opera
18	07.06.2012	74	Interview, Opera HQ	Transcribed	14	Nor	1	Opera employee	Opera, Senior Account Executive, Selected T1 Accounts, Opera
19	21.06.2012	N/A	E-mail	Written answer	1	Eng		Opera employee	Market Coordinator, Sub-Saharan Africa, Opera
Total		127	Minutes		160		16		
		21,2	Hours						

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