

Assessment of M-Content Requirements in India and Uganda

Summary Report



Executive Summary

This summary report presents key findings from a research report produced by the Commonwealth Telecommunications Organisation (CTO). Funded by Ericsson, the project called on the CTO to describe and analyse the current and future mobile content (m-content) requirements of end-users in India and Uganda. Although some research in this area has recently been undertaken in India it is by no means comprehensive. In Uganda there has been little analysis of the situation despite the fact that an m-content industry has existed for more than ten years. As such, the CTO and Ericsson hope this report will contribute towards improving m-content development in both countries, as well as further a field.

Today, policy makers, mobile operators, donors and users see the mobile phone as more than a tool for talking. This can partly be attributed to the growing popularity of Value Added Services (VAS) delivered through mobile phones. VAS has become a key way for operators to develop new revenue streams, differentiate themselves from competitors, attract new customers and retain existing ones. Strong growth in the use of VAS such as ringtones, games and wall papers, has seen it contribute between 5% – 10% of operators' revenues and many are aiming for 100% growth during 2008. This trend has coincided with a growing number of initiatives that have used mobiles to provide content that has positively impacted on socio-economic development outcomes. As a result, many stakeholders are now focused on the development of m-content.

Stakeholders in the Indian and Ugandan m-content sector are working towards increasing the range and quality of m-content available in order to meet users' requirements. Following analysis of survey results from 602 end-users in Uganda and 909 in India, as well as consultations with key stakeholders from government, regulatory authorities, mobile operators, content producers and civil society, this report concludes that the future of m-content in both countries is bright.

When asked about their intention to use m-content services in general, end-users were overwhelmingly positive, with 96% of respondents in both countries expressing a positive intention to use services. However, this positive intention will only feed into the development of m-content if there are services that meet users' requirements. There are few m-content services that could effectively contribute to meeting the most important information requirements concerning users' livelihoods which relate to reducing vulnerability by being able to contact people in emergencies and increasing human capital through education and training. This is not surprising since much of the m-content available in both countries is entertainment based.

Despite the lack of socially orientated content, most users are aware of the various forms of m-content that are available and do use them to different degrees. In India the most commonly used types of content are games, downloaded ringtones and music. In Uganda the situation is different with airtime transfer ranking number one followed by games, news and sports. Interestingly, users from each country show a great deal of satisfaction with the services they use most and believe they represent good value for money.

Evidence of user satisfaction is important for those intent on the development of m-content in both countries as it suggest that users will continue using the services. However, it is only one piece of the jigsaw. It is imperative that content producers and operators push the envelope and develop new services in order to increase demand. There is little consistency in the innovative services that respondents from India and Uganda intend to use in the future. In India the top ranked service was listening and downloading music, with obtaining exam results at number two. In Uganda, an advice line on healthcare and health products was ranked number one while services that enable people to find jobs was second. Watching television was the only m-content service that appeared in both countries' top five list of services. The report also suggests that Internet over mobile, remittances and m-banking may be highly demanded in future.

Currently, most content is demanded and delivered through SMS. However, key stakeholders suggest that the future will be characterised by a change in the way content is demanded and delivered. The increased use of technologies such as interactive voice recognition (IVR), which will remove barriers to m-content use such as illiteracy, as well as 3G and Unstructured Supplementary Service Data (USSD), which will give users a more interactive experience, will prove to be significant.

Despite the positive future for m-content development in India and Uganda there is a note of caution. Users in both countries identify the lack of m-content in their local language as the main barrier to using services. In turn, key stakeholders highlight numerous obstacles. Examples of policy and regulatory regimes that neglect m-content, poor collaboration between stakeholders, limited ownership of higher specification mobiles as well as the continued and unwarranted focus on entertainment based content are arguably the biggest obstacles.

Although overcoming the obstacles appears to be a daunting task, there is cause to be positive as there are a number of opportunities to increase the required types of m-content. Indeed, scope for increased collaboration, the falling price of entry-level handsets and strong examples of best practice from other countries, are all encouraging factors which will aid in meeting users' current and future m-content requirements in both countries.

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1. Purpose, Objectives and Methodology

Purpose

The purpose of the research project was to:

Describe and **analyse** current and future m-content requirements of end-users in India and Uganda.

Objectives

In order to fulfil the purpose of the project, six objectives were identified:

1. Determine end-users' and institutional users' requirements in terms of m-content
2. Evaluate the priority of end-users' and institutional users' requirements
3. Forecast changes in end-users' and institutional users' (government institutions and representatives) demand for m-content
4. Forecast changes in m-content developments/delivery
5. Identify major trends in and obstacles to the development of m-content
6. Identify opportunities for increasing required m-content

Summary of Methodology

The objectives were achieved using a range of qualitative and quantitative research techniques. These include:

1. Desk-based analysis of secondary sources.
2. 25 face-to-face interviews with key stakeholders including representatives from Government, operators, regulators, content producers and civil society.
3. Facilitation of two in-country key stakeholder focus groups in which key questions posed by the research were discussed.
4. Preliminary interviews with urban and rural end-users to inform survey design.
5. Mobile phone users surveyed in each research country (909 respondents in India and 602 respondents in Uganda)

2. Survey Respondents

The rationale for the study suggests trends in m-content usage will be set by relatively well off early adopters in urban areas. As such, survey respondents in each country were urban dwellers drawn from Socio-economic classification (SEC) A, B and C. The high status of the samples is confirmed by the fact that ownership of household assets is higher than national statistics – see Table 1.

Table 1 Comparison of household assets – sample and national survey

	India		Uganda	
	CTO	DHS ¹	CTO	DHS ²
	urban	urban	urban	urban
Electricity	99.9%	93.1%	96.7%	41.8%
Household assets				
Radio	47.3%	38.9%	99.2%	74.8%
TV	97.8%	73.2%	90.5%	25.5%
Mobile phone	86%	36.3%	88%*	53.8%
Non-mobile phone	34.9%	26.7%	27.2%	3.1%
Refrigerator	67.7%	33.5%	71.4%	13.7%

In Uganda the respondents were equally split between Uganda's three largest cities: Kampala, Jinja, Mbarara.

In India the respondents were equally split between nine different cities: Delhi, Kolkata, Mumbai, Nagpur, Patna, Coimbatore, Bareilly, Ujjain and Warangal.

3. Users Current M-Content Requirements

The priority livelihoods issue identified by users provide a strong indication of what information users will consider most important and therefore what kinds of services m-content industry stakeholders should create. There is a great deal of consistency between respondents from India and Uganda in respect of what livelihood issues were most important to them see figure 1.

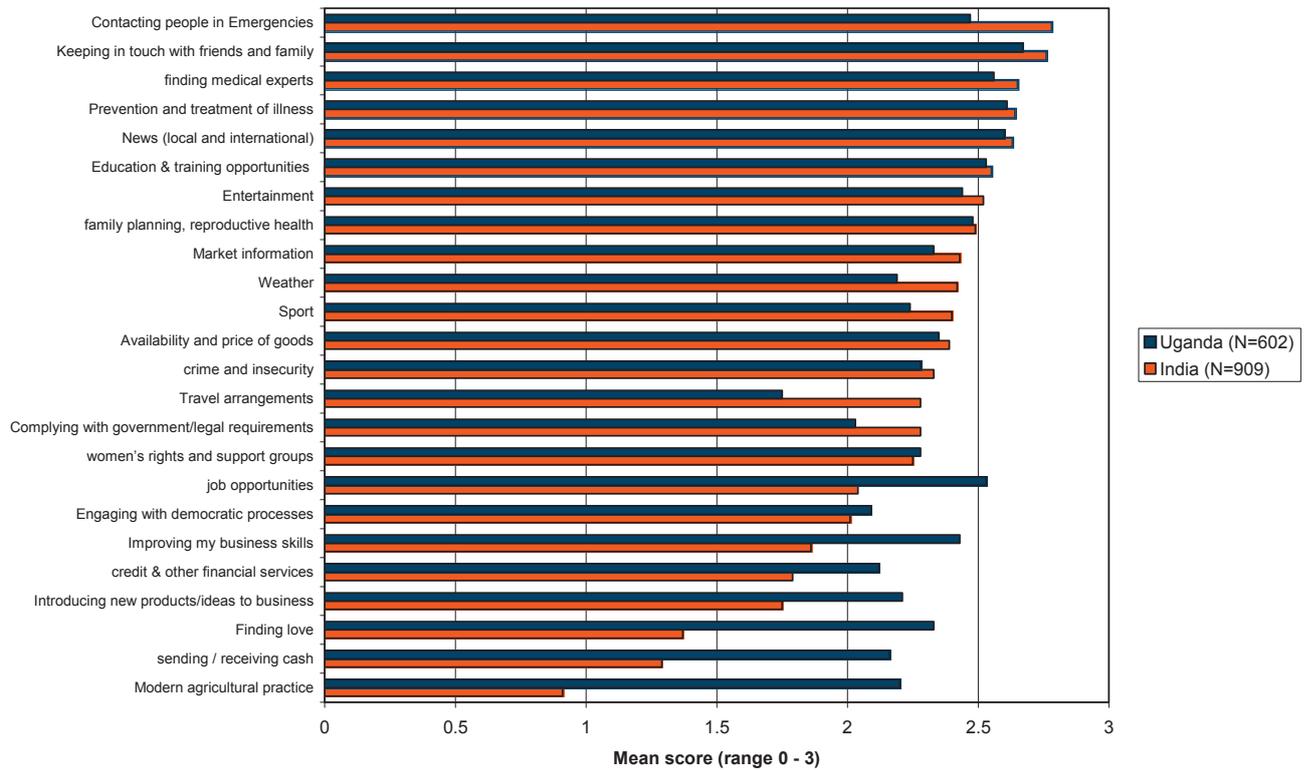
- Contacting people in emergencies
- Keeping in touch with friends and family
- Finding medical experts
- Prevention and treatment of illness
- News (local and international)
- Education & training opportunities
- Entertainment
- Family planning, reproductive health



¹ DHS - Demographic and Health Surveys. International Institute for Population Sciences (IIPS) and Macro International. 2007. National Family Health Survey (NFHS-3), 2005–06: India: Volume I. Mumbai: IIPS.

² DHS - Demographic and Health Surveys. Uganda Bureau of Statistics (UBOS) and Macro International Inc. 2007. Uganda Demographic and Health Survey 2006. Calverton, Maryland, USA: UBOS and Macro International Inc.

Figure 1 Importance of livelihood issues



The livelihoods issues that are most important can be categorised into livelihoods aspects as follows:

- Reducing vulnerability (or responding to shocks) e.g. contacting people in emergencies, finding medical experts, prevention of illness
- Human capital – health, education and training
- Wellbeing – although not obviously an economic benefit, people place high importance on entertainment and news

Unfortunately, many of the livelihoods issues that users consider most important are not fulfilled by the current range of m-content services available in either country. Demand for existing m-content services should confirm how respondents’ livelihood priorities convert to actual use of m-content services, but only to the extent that services currently available mirror the range of livelihood issues. The extent of overlap is presented in Table 2 which highlights those livelihoods issue/information requirement that could be met by m-content at the moment.

“It is difficult to identify user requirements because commercial interests push what is available.”

Mr. Naimur Rahman, Managing Director of One World South Asia (India – Non Governmental Organisation)

Table 2 Livelihoods issues for which m-content services are currently available

	Current M-Content
Contacting people in Emergencies (deaths, natural disasters etc)	
Keeping in touch with friends and family members	
Finding medical experts (doctor, clinic, hospital)	
Prevention and treatment of illness within the family e.g. HIV/AIDS	
News (local and international)	X
Education & training opportunities e.g. finding schools, courses	
Entertainment (e.g. music, video, gossip)	X
Family planning, reproductive health (sex education)	
Market information e.g. market prices, expanding into new markets	X
Weather	
Sport	X
Availability and price of goods (buying or selling)	
Crime and insecurity	
Complying with government and legal requirements	
Travel arrangements	X
Women's rights and support groups	
Job opportunities	X
Engaging with democratic processes – having your say	
Improving my business skills e.g. bookkeeping courses	
Credit & other financial services	X
Introducing new products & ideas to your business	
Finding love (dating, matrimonial)	X
Sending/receiving cash within the country (e.g. payments, remittances)	
Modern agricultural practice e.g. crop and livestock management	

Only one third of the livelihoods issues that were considered important could be met, or enhanced by m-content services that are currently available. This is because most m-content available is entertainment based commercial such as ring tones and wallpapers. The lack m-content related to livelihoods issues highlights a critical problem in development that must be addressed.

4. Users Priority Requirements: Existing M-Content

While there was consistency between the countries in regards to the most important livelihoods related m-content, there was no evident consistency in the demand for m-content that is currently available.

In India the priority types of content are:

1. Games
2. Download Ring tones
3. Download Music

In Uganda the priority content are:

1. Airtime transfer
2. Games
3. News
4. Sports

The findings from India support industry data and stakeholders views regarding the popularity of entertainment based content, especially music based content. In contrast, the findings from Uganda go against industry data and key stakeholders' belief that entertainment based content such as ringtones and wall paper are the most popular.

The popularity of airtime transfer, which was only introduced to Uganda in 2006, supports the view that users make use of m-content services that meet their most important livelihoods needs, as well as the key stakeholders' argument about the need to increase the amount of socially orientated content. Transferring airtime to loved ones so that they can make calls or send SMS compliments the two most important livelihood issues identified by Ugandans: contacting people in emergencies and keeping in touch with friends and family.

Priority Services for Institutions

Institutions have needs as both users of m-content and disseminators of it. For the most part representatives of the institutions consulted showed a great interest in m-content during consultation, but were quick to admit that they, along with their colleagues, had rarely used m-content. Indeed, many currently believe that m-content is largely entertainment based and therefore not useful for them. Of course, this is indicative of the disparity between the amount of entertainment based m-content and of utility based m-content available.

“Users from government institutions have not showed an interest in using m-content. Mobile content is still regarded as leisure and fun content.”

Mr Kenneth Kiddu – Head of Product Development MTN, Uganda (Uganda – Mobile Operator)

5. Value for Money and Frequency of Use

Overall respondents are happy with the price they pay for services and most think the services they use offer value for money. For the most part, the most frequently used services (see Section 4 have the highest value for money mean scores. This suggest that services which provide good value for money, by saving time, expenditure or effort, will be most popular.

Interestingly, there are some services which may meet high priority information needs, and be considered as good value for money, yet are used infrequently. For example, job alerts are considered good value for money but rarely used in either country. Country specific examples include:

India:

1. Travel enquiries
2. Job alerts

Uganda:

1. Religious/inspirational
2. Job alerts



Despite the satisfaction with the value for money amongst survey respondents, preliminary interviews with rural and urban end users highlighted a problem with lack of transparency and poor understanding charges for subscription services in which an amount is debited over intermittent periods rather than per download or receipt of content. This is obviously a problem for stakeholders in m-content development who may find a growing band of people do not use services due to bad user experience.

6. Predicting the Future Uptake of Services

96% of respondent expressed a positive intention to use m-content services in the future; this intention is driven by a positive attitude towards m-content services in general. However, there is little consistency between the countries in terms of the services users would like to use in the future. Only TV comes in the top five lists of both countries.

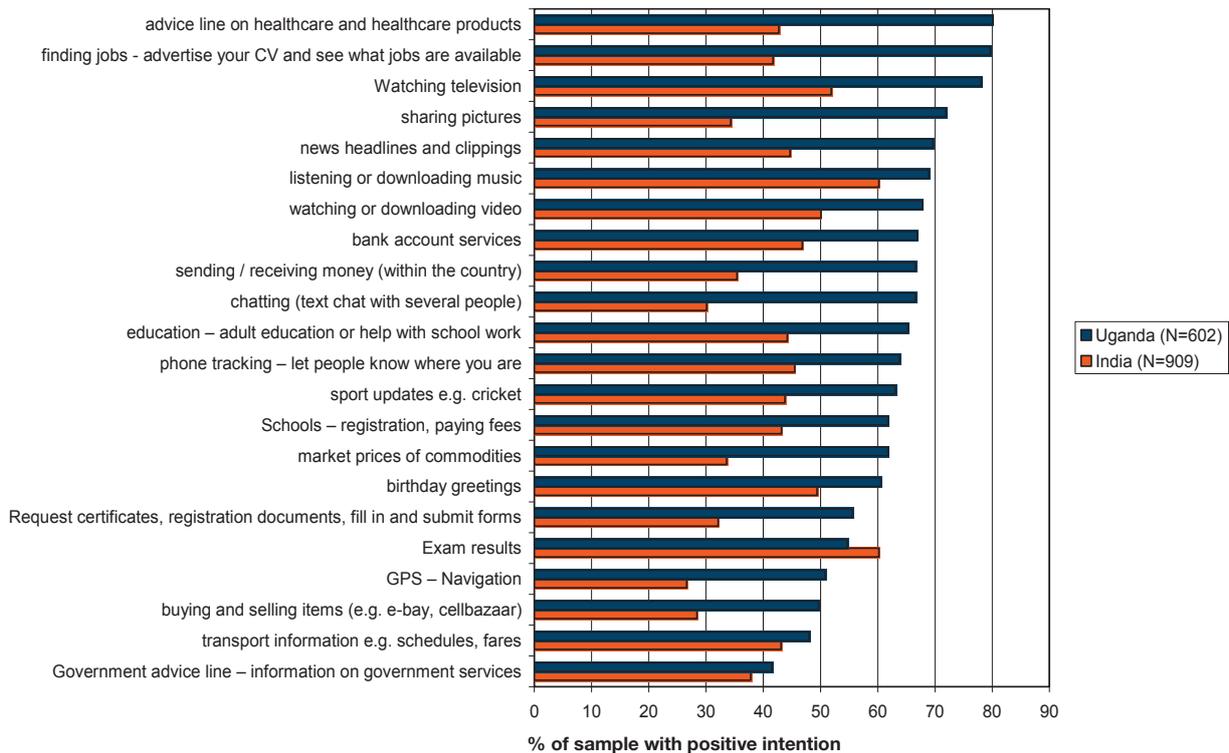
Top ranking services for future use in India are:

1. Listening or downloading music
2. Exam results
3. Watching television
4. Watching or downloading video
5. Birthday greetings

Top ranking services for future use in Uganda are:

1. Advice line on healthcare and healthcare products
2. Finding jobs - advertise your CV and see what jobs are available
3. Watching television
4. Sharing pictures
5. News headlines and clippings

Figure 2. Proportion of samples expressing positive intention to use m-content services



The data also provides some indication of other service that may prove popular in future. The data on communication expenditure suggests there may be latent demand for Internet over mobile or wireless Internet. Currently, few users have an Internet connection at home due to the low number of fixed lines, but many spend the same amount of money on gaining Internet access as they spend on mobile phones.

Although Television is almost universally used in India, the low use of radio indicates that there be a demand for broadcast types of content which people are not currently able to get on their mobile, such as music, news and drama.

Despite infrequent use of current m-banking services in both India and Uganda, two thirds of the Ugandan sample (and one third of the Indian sample) indicated they are likely to use a service for sending/receiving money. As rural livelihoods become increasingly vulnerable (due to global warming, HIV/AIDS for example), it is likely that trends in rural – urban migration and reliance on remittances will continue, increasing the demand for money transfer services. Key stakeholders in both countries also expressed a strong believe in future uptake of m-banking and remittances, while many are currently developing services to meet the latent demand.

Future Uptake of Services amongst Institutional Users

Despite their limited use, most institutional users do wish to use m-content and there was a general consensus about the kind of services they would like to use. In particular services which will improve intra and inter institution networking were highlighted.

In addition to the benefits of networking, Indian key stakeholders highlighted the need for mobiles to facilitate more transactions such as paying bills, banking and paying for good and services. Stakeholders confirmed that there were services which enabled users to check the status of things such as, exam results, utility bills and bank accounts. However, most felt the functionality within such services needed to be improved so that users could complete transactions using the phone. It was argued that increased functionality would make the services far more popular because they would be used to make greater savings in respect of time and money.

“If teachers are being posted or relocated into another school you should be able to gather information through mobile. Then even students! They should be able to use the chat or networking services to discuss lectures, their work in class or pose a question.”

***Mr. Mukooyo Humphrey, Senior Information Scientist, Ministry of Education & Sports
(Uganda – Government)***

7. Main Drivers and Barrier to Future Use of Services

Factors acting as drivers supporting use of m-content services in the future for both countries include:

- Saving time
- Improved status and self esteem
- Ability to provide a record to refer to later

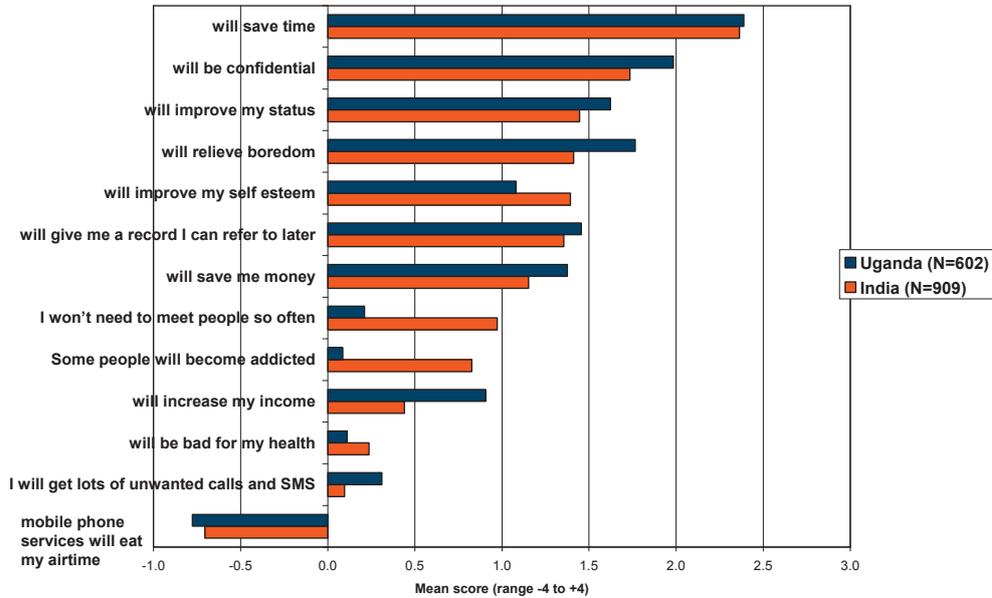


Figure 3 Comparison of attitudes towards use of m-content services

There are marked differences between countries in respect of factors most likely to act as barriers to the use of m-content services in the future.

In both countries the lack of content in local languages and perceived high costs were found to be important barriers (see figure 4). Country specific barriers include small screens in Uganda and not knowing how to use services in India.

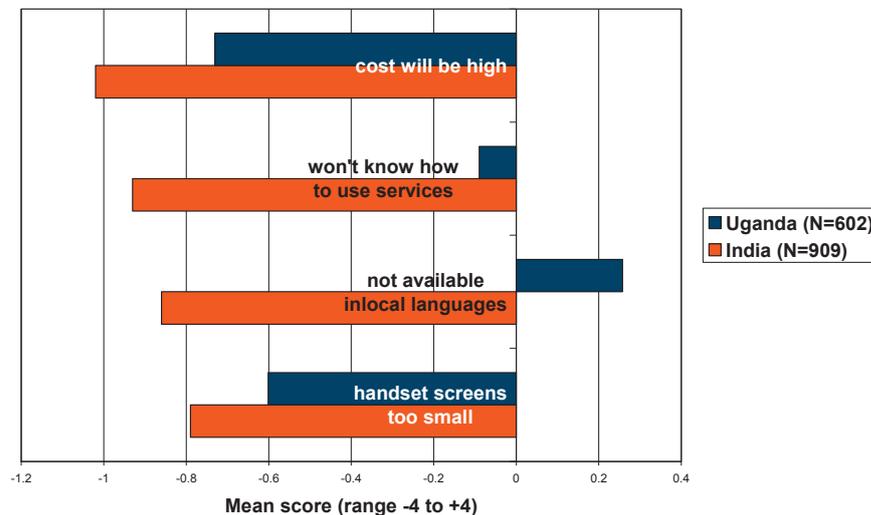


Figure 4 Comparison of control factors affecting use of m-content services

8. Predicted Changes in the Delivery of M-Content

The delivery of m-content will change in the near future, although the extent of changes and the way it will occur may vary in the two countries. Key stakeholders from each country provided a wealth of information about how they believe the delivery of content will change in the short term. Table 3 below summarises the changes identified by key stakeholders. What is evident is that many of the changes, such as the growing use of ³USSD and shift in the m-content value chain, are already taking place.

Table 3 Summary of Predicted Changes in the delivery of m-Content

Change	Identified Change in Delivery	Possible Impact
Shifting Value Chain	<p>Content Copy Right Owners will sign create and supply their own content to operator networks (India)</p> <p>Operators will start creating their own content (India and Uganda)</p> <p>Content aggregators increase content production and the development of applications (India and Uganda)</p> <p>Technology enablers move into content aggregation sphere (India)</p> <p>End users creating their own content and uploading it onto platforms provided by operators and handset manufacturers. (India)</p>	<p>Small content producers go out of business</p> <p>Small content creators go out of business while</p> <p>Greater innovation in respect of applications and content</p> <p>Reduction in smaller content producers</p> <p>Increased user engagement with content and far more innovation in the sector.</p>
3G	Operators will use 3G to supply richer, bandwidth intense content (Uganda – 3G is yet to be launched in India)	The impact on levels of demand for m-content will be limited due to small number of people who have 3G handsets, but it will have a major impact on how the phone is viewed i.e. people will see the phone as more than just a tool for talking.
Interactive Voice Recognition (IVR)	Great use of IVR as alternative to SMS based services (India and Uganda)	Possibly have a huge impact due to its ability to negate constraints such as illiteracy and issues concerning local language, but much will depend on reducing the price of the service.
WAP	WAP based services are a means of giving users more interactive experience (India and Uganda)	More WAP based services created, but impact may be limited due to low numbers of phones with WAP functionality and the limited user experience in terms of speed and interface.
Unstructured Supplementary Service Data (USSD)	Increased use of USSD (India and Uganda)	Set to change the user experience with m-content by removing latency and undelivered content that is associated with SMS.
Mobile Advertising	Great use of advertising in m-content (India)	Possible fall in the cost of content or supply of free content. However, questions remain about how many companies will send untargeted adverts via mobile phone when the recipient remains unknown
Rural Markets	M-content to be developed and targeted directly at rural consumers (India and Uganda)	Major impact because majority of population in both countries live in rural areas providing increased consumer base.

³ USSD - Unstructured Supplementary Service Data is a standard for transmitting information over GSM signaling channels. It is often used as a method to query the available balance and other similar information. USSD is network-dependent and depends on the specific services the operator is offering.

9. Obstacles and Challenges

The future of m-content in both countries bodes well, but there are some challenges and obstacles that must be overcome if the potential of m-content is to be realised. **Table 4** below summarises those obstacles identified by key stakeholders and when necessary highlights the country in which they are most pronounced.

Table 4 Summary of Obstacles and Challenges

Obstacle	Nature of Obstacle and Country where obstacle exists
Policy environment is not focused on m-content.	Taxes on mobile services are too high and make SMS relatively expensive. As SMS is main way of demanding content the high price acts as a disincentive to usage (Uganda) Policy makers have delayed launch of 3G and created uncertainty (India)
Regulatory environment	Regulators do not have employees that have worked in the content industry and therefore do not fully understand how it works. The lack of understanding means regulatory measures taken are believed to have impeded the development of the sector (Uganda)
Mobile handsets	Low number of GPRS, WAP and 3G enabled handsets in the market (India and Uganda)
Bureaucracy	High levels of bureaucracy have stifled the development of government related mobile services (Uganda) Bureaucracy had held back roll out of 3G (India)
Intellectual Property Rights (IPR)	Poor IPR and copyright enforcement has limited the sustainability of projects and reduce innovation amongst content producers (Uganda)
Literacy and local language	Large sections of the population are not literate and cannot engage with text based or delivered, content which makes up the majority of content. (Uganda and India) Many users will require m-content in local languages, more over they may have a preference for local content. At present, little content is created in local languages and few handsets support the content that is. (India and Uganda)
Lack of consultation and collaboration	Lack of collaboration between industry players (content copyright owners, content producers, aggregators, operators, handset manufacturers and civil society organisations) (India and Uganda)
Electronic transactions	Financial transactions over mobile phones will require new regulations and legislation (cyber laws) which are now being implemented (Uganda and India)
Price of VAS	The current price for content is acting as disincentive to produce content because it has been historically low and has not risen in line with costs of producing content (Uganda) Too high in comparison to voice call, which are some of the lowest in the World so acts as a disincentive to potential m-content users. (India)
Revenue share from VAS	Current revenue sharing models in which operators keep majority of revenue (60% Uganda and 70% in India) is major disincentive to potential content producers entering market.
Culture of voice	Users in both countries have a preference for voice based services over SMS and other technologies. (India and Uganda)
Low ICT capacity	Too few capable content producers are available to create and upload content. (Uganda)
Lack of socially orientated content	Most of the content currently available is entertainment based and this has limited demand as many users will want services that actually add more value to livelihoods.

10. Opportunities for Increasing the Availability of Required Types of M-Content

Increasing the availability of the types of content required by those consulted calls for measures to increase both the demand and supply of m-content. Consultations with key stakeholders and end-users have uncovered a number of opportunities that can be seized in order to do so. The remainder of this section briefly summarises them.

Leveraging Civil Society Organisation Expertise for Livelihood Related M-Content

Civil society organisations (CSOs) operate in both urban and rural spaces. As such, they have a strong understanding of livelihoods issues and could play an important role in the development of related m-content. While most of the CSOs consulted showed a willingness to get involved, few had established relationships with operators and content producers that would facilitate this.

The knowledge of livelihoods issues and strong understanding of users' needs represents an opportunity for content producers and operators, who generally accept their lack of knowledge concerning such issues, especially when it comes to rural users. This opportunity could be seized if they were to develop formal relationships with CSOs. As this report has indicated, mobile operators in India now have dedicated teams who work to understand and develop livelihoods services, this work could undoubtedly be enhanced with the greater involvement of CSOs.

Using Regulatory Authorities Data

TRAI and the UCC are two of the most advanced regulators in developing markets in terms of the information they collect and disseminate concerning their respective telecoms sectors. Both have well established departments that are dedicated to collecting data on the usage of mobile telephony. Much of data comes from engaging with users and soliciting information about their usage of mobile phones.

At present, much of the research work focuses on voice, as it continues to be the killer application. However, it would be possible to collect data that could feed directly into content creation for a relatively small additional cost in time and effort. Seizing this opportunity would build a stronger picture of users' needs which could be used to enable the development of required services and help increase awareness amongst users.

Call for Dual Focus by ICT Policy Makers and Regulators

To date, the policy makers and regulators in both countries have justifiably focused on increasing the use of voice services. Policy and regulatory tools have proved successful and both countries have witnessed strong growth in mobile penetration. There is, however, merit in paying some attention to m-content, especially because it has the potential to contribute to achieving socio-economic development.

Policy makers and regulators could appoint an m-content champion in their respective institution who would be responsible for ensuring that policy and regulatory measures recognise the need to increase the use of m-content. While having a keen understanding of the m-content industry is necessary for creating an enabling environment for further development; the champions could also act as the focal point for institutional users within their respective organisation. As such, they would be able to increase awareness of m-content amongst institutional users.

Increasing M-Content Advertising

Despite positive views about the cost of m-content and its value for money amongst respondents it is important to keep in mind that they are high status. It is likely that the majority of users, many who live in rural areas, will find m-content services relatively expensive which will, in turn, impact on demand. As stated elsewhere, advertising represents an opportunity for content producers and operators to cover the costs of production and reduce the cost borne by consumers or make content free altogether.

Despite some success stories, many companies are still hesitant about mobile advertising because they do not feel that ad campaigns can be targeted to specific consumer groups. Operators in both countries do not have profiles of subscribers, making it difficult to sell the idea to advertisers on a level that would bring high enough revenues to subsidise content, let alone make it free at the point of use.

That being said, Indian operators have a unique opportunity to obtain and record detailed information about their subscribers, which would enable them to create profiles of users. Unlike users in many developing countries, Indian users must complete registration forms and provide two passport sized photographs in order to obtain a pay as you go SIM card for their desired network. If stored properly operators could work with advertisers to use this information in targeted advertising campaigns – with users consent of course.

Greater Collaboration between Content Producers

The lack of collaboration and consultation between content producers and operators is seen as major impediment to increasing the availability of required m-content. In South Africa collaboration between operators, content producers, aggregators and others stakeholders in the m-content industry is strong. This is partly due to the existence of Wireless Application Service Providers' Association (WASPA), an independent, non-profit organisation that represents the interests of organisations that provide mobile application and services. While the South African m-content industry remains phenomenally competitive, WASPA provides a focal point for the industry which has proved instrumental in its development.

By developing a content code in consultation with its members and the South African regulator, WASPA has provided a mechanism for self regulation and proved for be an effective means of articulating its members' needs to other stakeholders. It is possible that content providers in India and Uganda could also benefit from an organisation that would help build the necessary consensus to effectively lobby stakeholders such as policy makers, regulators and operators in order to develop an enabling environment for m-content.

Improved Collaboration between Handset Manufacturers and Content Producers

At present handset manufacturers have strong working relationships with operators. As such, operators are often the first to know about new functionality within mobile handsets and can act on such information. While content producers in both countries have reasonable knowledge of forthcoming technologies and handsets, there would be merit in handset manufacturers having stronger relationship with content aggregators and copyright owners; enabling content producers to better plan for the production and dissemination of required content.

For handset manufacturers it would be difficult to work with all content producers in the countries, but there are a number of major content copyright owners, content producers and content aggregators that it would be worthwhile establishing relationships with.

ICT Capacity Building

The lack of expertise in respect of m-content creation was one of the major problems facing the content industry in Uganda. The relative size of the two countries' content creation industry is indicative of the negative effect the lack of content producers has on availability of required m-content. While members of the m-content creation industry in Uganda have tried to improve the situation by training selected IT graduates, they complain that many leave university ill equipped for content production. The opportunity exists for handset manufacturers, donors or operators to help improve the institution by working with universities in Uganda to develop and implement m-content training programmes into degree courses. Stakeholders from the university would welcome such initiatives, as they acknowledge that courses do not adequately prepare graduates.

3G for Mobile Television and Internet

When examining the uptake of future services, the only service that was found in the top five for both countries was mobile TV. Clearly amongst high status users with 3G handsets there would be demand for TV on the move. The findings also highlight that mobile internet may also prove popular. That being said, the availability of TV and high-speed internet over mobile is circumscribed by the lack of 3G in India. In Uganda the launch of 3G in March 2008 means that Uganda Telecom can seize the opportunity to meet this demand. The launch of 3G in India would provide its operators, who are said to be ready and waiting to launch various 3G services, with the opportunity to do the same.

Simple User Guides to SMS

SMS remains the most popular way to demand and supply m-content. Unfortunately, many users in the research countries are unable to use SMS due to literacy issues and because they not know how to use SMS despite being literate. The use of SMS can be taught to someone who is literate if an easy guide to SMS was provided within the instruction manual of each mobile handset that is sold or on a leaflet sold with each SIM cards. This may remove the difficulties some have with adopting the use of SMS increase the demand for services.

Local Language on Mobile Phones

The inability to receive m-content in local languages on mobile phones remains one of the biggest obstacles to the use of m-content. While the use of technologies that facilitate the dissemination m-content through voice have great potential, it is important that handset manufacturers continue to work towards developing handsets that enable the dissemination of content in local languages. In recent years, handset manufacturers have begun to meet this important goal and a number of handsets now support various languages, but efforts must be increased to eradicate this impediment.



Remittances and M-Banking

M-content centred on banking and remittances would be extremely popular, especially in countries like India and Uganda which are characterised by large unbanked populations and multi-spatial households (national as well as international). The frequent use of air time transfers amongst our Ugandan respondents highlights the potential popularity to an extent.

In both countries stakeholders are working hard to increase the availability of these services, but these efforts could be increased with greater collaboration between the m-content and financial industries. There are numerous examples of m-banking and remittances services globally and these provide the players in both countries (most notably those in Uganda, as India has quite well developed m-banking services) with the opportunity learn and adopt. Of course, every country is different and successful adoption of services that have been rolled out elsewhere will require content producers, aggregators, mobile operators, financial institutions and regulators to work effectively together.

ABOUT ERICSSON

Ericsson is the world's leading provider of technology and services to telecom operators. The market leader in 2G and 3G mobile technologies, Ericsson supplies communications services and manages networks that serve more than 195 million subscribers. The company's portfolio comprises mobile and fixed network infrastructure, and broadband and multimedia solutions for operators, enterprises and developers. The Sony Ericsson joint venture provides consumers with feature-rich personal mobile devices.

Ericsson is advancing its vision of 'communication for all' through innovation, technology, and sustainable business solutions. Working in 175 countries, more than 70,000 employees generated revenue of USD 27.9 billion (SEK 188 billion) in 2007. Founded in 1876 and headquartered in Stockholm, Sweden, Ericsson is listed on OMX Nordic Exchange Stockholm and NASDAQ.

ABOUT CTO

The Commonwealth Telecommunications Organisation (CTO) www.cto.int is an inter-governmental developmental partnership of Commonwealth & non-Commonwealth governments, regulatory agencies and ICT operating companies. With a history dating back to 1901, the CTO's current mandate is focused on promoting the effective use of ICTs for the socio-economic development of its member countries. With a focus on telecom policy, regulation and operations, its core functions include research, advisory services and consultancies, training and capacity building, and the provision of knowledge-sharing events.

CTO research activities were carried out in collaboration with Gamos Ltd. Gamos seeks to empower individuals and communities in the poorer sections of society in developing countries by working with.



