ARTICLE

PUSHED NEWS:

When the news comes to the cellphone

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ABSTRACT Combining two findings of recent surveys on the Internet which state that 1) "the Internet will soon surpass all other media as a main source for national and international news" and 2) "the mobile device will be the primary connection tool to the Internet in 2020" leads us to the conclusion that smartphones will soon be the primary source for news access. But if so, how will news come to the Internet-connected cellphones? In accordance with the distinction, already drawn in 1997, between push and pull technologies as two different forms of how content is delivered to the end users, cellphones are characterized as push devices (passive reception), in opposition to computers, classified as pull devices (active reception). The news items that fit cellphones are pushed news. And they will be pushed as SMS, e-mails, tweets and through news aggregators.
Key-words: cellphone, mobile, journalism, news, push technology.

INTRODUCTION

When push technology came to life in 1997, it was regarded as a "seismic shift in the way content is delivered on the Internet" and hailed as a "technological revolution" that initiated a new era of news delivery as online information (Lasica, 1997). Push technology appeared as an adequate solution to the bottleneck of low-speed Internet connections of 14.4-Kilobits-per-second modems. Instead of waiting patiently for the information, users would have content delivered directly and without delay. People would receive with all convenience in their mailboxes all the information they wished, instead of having to search for it in a cumbersome way through thousands of websites. Secondly, and most important, push technology would empower readers enormously "by letting them specify what content they want delivered, as well as how often. The best push media allow consumers to customize and micro-tailor their news choices." (Lasica, 1997). If people, tired of surfing trough broken links and dead ends, visit the same sites 90 percent of the time, how could they not welcome a customized delivery of content

tailored according to their preferences? Push technology would then give a new life to the "good old e-mail as the ultimate push", preferring it to "Web surfing as the ultimate pull".

A rather different account of push and pull news is given by Martin Kaplan (2009): "Push-news is what media gatekeepers dangle to grab our lizard-brain´s attention (...) Pull-news is what people seek out." Kaplan goes further and identifies push-news with "crime, celebrities, fires, freak accidents" and pull-news with the news that active, conscientious citizens select from among the many information sources. In fact the initial hype and the best hopes concerning push technology in the nineties did not materialize in a more responsible and autonomous selection of content. The extraordinary increment of bandwidth favored Web browsing, bestowing upon it a sense of unlimited freedom. Not only did the e-mail not achieve supremacy over the browser, in fact the opposite occurred: the browser ended up incorporating e-mail in the form of Web mail.

It cannot be stated that there is a contradictory meaning of "push" in Lasica's and Kaplan's perspectives. In both cases "push" means what is delivered to us by someone else. Where Lasica and Kaplan differ is in the attribution of the responsibility to the one who determines the content.

In the very beginning of push technology there was the generous thought that Internet users would assume the task of customizing their own content, but further development showed that it is much easier to waive that task and let others put together the content that will be pushed to us. Of course, broadcasters will offer us what we want, and they will be all the more pleased if they can provide us with the content demanded by our deep preferences, of which we are not even aware.

Kaplin´s definition of pull-news -- "pull-news is what people seek out" -- is explained with specific examples: "if you seek out online news aggregators whose priorities you find nutritious; if you bookmark blogs whose hyperlinks take you off the beaten path -- if you've become your own meta-editor and meta-publisher, then you're among the minority who have filled the responsibility-vacuum abdicated by push-news." This burdensome task of pulling information can be regarded as identical to the self-customization of pushed news as conceived by Lasica.

There are different levels of push and pull moments in news information processes. TV broadcasting is clearly a push technology. The viewer has no say about what is being delivered when he turns on his television set. However, it is up to him to decide at what *Time* he switches it on or off, or zaps among channels. These last actions have clearly a pull dimension: the viewer seeks out what he wants to watch.

The same happens with newspapers. Their content is put together and pushed to readers. However, is up to the latter to decide not only to choose and buy a newspaper, but also to read or ignore some news items.

The meaning of push and pull becomes clearer if we associate it with the concepts of passivity and activity. Push technology implies passive reception and pull technology implies active reception.

Cellphone is Push, computer is Pull

The cellphone is primarily a push device. Incoming calls and SMS do not depend on the will of the receiver. They are indeed paramount examples of push technology. With this technology, the receiver is completely passive: he has no control over the time, the sender or the contents of the incoming calls or text messages.

With computers everything works just the other way round. Computers are primarily pull devices: people who surf the web for content determine exactly which sites they go to, when to do it and what they are looking for. In the case of the cellphone, the information is pushed; in the case of the computer, the user pulls it.

The push properties of the cellphone derive in part from its audio nature. Of all our five senses, hearing is the most "pushable" sense, the most passive in reception. While sight has in great measure aspects of active reception -- we can close our eyes, we can focus them on something or turn them away from something we do not want to see – hearing is almost a completely passive sense: ears cannot close themselves, they cannot waive this or that sound, and even during our sleep they stay open, ready to receive any external stimulus.

The traditional fixed phone is a device whose properties are akin to those of the hearing sense. It is always on (even when electricity fails!), anyone can call it, and calls can come in at anytime. In our homes there is probably no other device more push-oriented than the phone. When we use the phone in a pull way to call someone, it is the dialed phone that plays the push or passive role.

The computer is primarily a visual device. It is true that today almost all personal computers are multimedia, with sound boards, loudspeakers and microphones, but the screen is much more essential to the computer than its audio components. If its sound system breaks down, we can still perform the usual tasks, such as writing a text, checking the e-mail or surfing the web.

That said, it is clear that cellphones and computers have different roots. Cellphones belong to the audio domain of human perception

and computers to the visual domain. This is a substantial difference between the two devices that should not be overlooked. The fact that today cellphones have gained a screen and have become, in a certain way, small computers, ought not be a reason for regarding them as little netbooks, thus failing to perceive the distinctive nature of this medium. Indeed, both can have the same features with respect to surfing the web, checking e-mail, making calls or listening to music, but their different origins continues to make them different devices. This is visible in the way we use them on a daily basis. We use cellphones on the move, when we walk, or even when we drive. We do not do that with netbooks. And the reason is because the former are primarily audio devices and the latter are visual devices.

In order to characterize the mobile phone as the seventh mass-media, and to distinguish it from the other six (print, recordings, cinema, radio, television, and the Internet), Tomi Ahonen (2008) specifies seven unique capabilities of the mobile. The third capability pointed out says "the mobile is the only always-on mass media". That means that anywhere and at any*Time* a message, a call or an SMS can be pushed to the seventh media. Clearly, we have radio and TV broadcasting 24 hours a day, but nobody will tune in for that long. As the mobile is always on, it is "the only media that can reach us in our sleep." This observation is indeed very meaningful, because by owning a phone, we are ready to receive permanently pushed information, but we cannot pull information around the clock.

The networked cellphones

Smartphones are often presented as small computers that can also place phone calls. In fact they have operating systems similar to those of computers (iPhones and Windows Mobile phones) and also browsers to surf the Net. With the introduction of broadband, in particular 3G, they are indeed good Internet-connected devices, allowing the user to navigate the web and to download files. At the same time, more and more web sites offer specific versions for mobiles. Naturally, one can ask: have the cellphones become pull devices? At first sight there is no doubt that with the introduction of the iPhone in June 2007, surfing the web with a smartphone is no longer an odd action by some geeks. The tendency we can observe since then to increase the screen size of the cellphones was motivated not only by the desire to give phones the usual productive capabilities of PDAs, but also to improve web browsing capabilities. Indeed several applications for the iPhone conceived for surfing directly and conveniently newspapers such as the *NY Times*, *El Pais*, *Le Monde*

and *The Daily Telegraph* among others, show that the news corporations are betting on the pull capabilities of the new media. However, I want to maintain that smartphones are primarily push devices.

Where smartphones excel as communication devices is in the e-mail service. The extraordinary success of the BlackBerry was based on its being the first device (2002) to receive and send e-mail in real time, wherever there was access to the wireless network of a cellphone carrier. The BlackBerry made e-mail really personal, freeing it from a networked computer. One could literally take his own e-mail Inbox everywhere, receive messages in real *Time* and reply to them immediately. It was so convenient that some people became almost addicted to the gadget. This is clearly a push feature of the device. The sound warning of incoming e-mail emphasizes even more its push nature.

It is generally known that among the developed countries, the USA was the last to be caught up in the SMS frenzy (Castells, 2004, p. 89). Youngsters in Japan, Korea and Europe made intensive use of SMS that deeply marked and shaped their culture (Castells, 2004, p. 153). SMS texting was much cheaper than calling and became the preferred way for youngsters to communicate with each other. SMS is clearly a push technology. Setting aside the differences between SMS and e-mail, we can certainly trace a huge affinity: both consist of text messages that are pushed to the receivers and both can be answered in real time. It is possible that in the foreseeable future, when all cellphones have become smartphones and all calls are done over VOIP, SMS and e-mail will meld into identical formats (text or multimedia). In any event, both e-mail and SMS are forms of communication that fit perfectly the push nature of cellphones.

Micro blogging is also something very appropriate to cellphones. The recent success of Twitter -- "to stay connected through the exchange of quick, frequent answers to one simple question: What are you doing?" -- would not be possible without the use of smartphones. It is the ubiquity of cellphones that allows tweeting from everywhere at any time. Well now, Twitter is a form of blogging whose main characteristic, besides the fact that each tweet is limited to 140 characters, is to follow someone and to have followers. When we follow someone, his tweets are pushed to our account, in way similar to that of a mailing list. Many newspapers have their own twitter accounts, and that is an easy way to stay up to date with the news, just by following them.

The fact that it is possible to pull information to cellphones through surfing the web cannot overshadow the fact that this is much more

cumbersome than doing it on a computer with a large screen. On the other hand, networked cellphones are much more appropriate for receiving pushed information than computers.

News alerts

That information is uncertainty is the basic principle of the Mathematical Theory of Communication. The more uncertain and unexpected the information is, the more it is news. In this sense, all news is something that we ignore, and therefore we could not search for or pull it. It is pushed to us, like something that strikes us, and usually comes as a surprise: that is what makes it news.

Lasica (1997) quotes Brad Templeton, founder and publisher of ClariNet Communications, saying: "The truest form of push is something that literally grabs you, makes your pager beep, pops up a window to interrupt what you're doing. But users will tolerate very little of that, and they'll have to have a high level of input on what they want to be alerted about".

A piece of information or a news item being pushed to someone is going to command his attention, even if only to interrupt or disturb him. Our permanent readiness to passively receive information from the outside world is enormously enhanced and at the same *Time* stretched to the limit with push devices such as the cellphone. Where is one to draw the limit, and which ways will be available to customize the content of what is pushed? This is a decisive question for the survival of pushed news, for users will not tolerate an intrusive technology if they do not have the means to control it.

Several news corporations already have subscription services for "Breaking news SMS alerts". The BBC has one such service, charging between 10 pence and 12 pence per message, while reassuring that the service will be used cautiously: 1) "Between the hours of 11 p.m. and 7 a,m. you will only hear from us if there is an event of major national significance." and 2) "We estimate that you will receive about 12 messages per month, depending on events"[1]. Similar "SMS news alert" subscriptions are offered by Sky News, *The Sun*, and *El Pais*, among others. Some offer the possibility to choose what kind of news should be sent (general news, sports or showbiz alerts), but common to all of them is the paid subscription. One has to pay to get the news via SMS alerts.

In Portugal all three major mobile carriers (TMN, Vodafone and Optimus) offer news alert services. Vodafone Portugal was "the first European carrier to launch a news service" (Ahonen 2009, p. 30). In fact Portugal, where the cellphone penetration rate is above 100% (Obercom

2008), is an advanced mobile country, the 18th in Ahonen's table of the 25 Advanced Mobile Countries, above Switzerland, France and the USA[2]. It was in Portugal that TMN (the carrier that belongs to Portugal Telecom) introduced in 1995 prepaid subscriptions, and thus revolutionized the cellphone market. Before that cellphone subscriptions were postpaid, based on monthly contracts, and regarded as a technology for business people. It was the pre-payment that made cellphones truly popular. Today in Portugal 90% of the subscriptions are prepaid (Obercom 2008).

The news alert service offered by the Portuguese carriers is provided through joint ventures with Portuguese media corporations. TMN has partnerships with Lusa, the Portuguese News Agency, with TSF, a 24 hour news radio, and with DiarioDigital, an online newspaper. The subscriptions are very diversified and charged differently.

Both Vodafone and Optimus offer their news alert service through a partnership with Público, the principal reference daily newspaper in Portugal. Vodafone has two services. The one called "Lastest News" is free and the subscribers receive 3 SMS per day. The other one is paid and each SMS costs 12 centavos.

From a questionnaire I sent to Público, I was informed that the number of SMS varies according to the service. Vodafone has an hourly service (the free one). For the paid services there are editorial criteria for choosing the news to be sent. Usually 5 SMS are sent daily. When I asked if there were some routines to compress the news to 160 characters, editor Sérgio Gomes answered that the amount of space available (145 characters for the Optimus service and 115 for the Vodafone service) was usually enough to convey the essentials of most reports. Indispensable in the compression is the use of key words, and the utilization of understandable acronyms is very helpful.

It should be said that the alert services of these carriers have a very broad range, going beyond news alerts. Vodafone has a list of 20 SMS/MMS services, among them Horoscope, Jokes, Traffic, and Stock Market.

There is an added value to pushed news. Only cherry-picked news will be included in an SMS alert. They must be considered worthy enough in order to be sent immediately to subscribers. There are periods of *Time* during the day (rest time) when the minimum level for alerting the subscribers is higher. Providers must show some restraint in the use of the SMS service. According to the BBC, only "an event of major national significance" will lead to the eventual waking up of the subscriber with an SMS alert.

One obvious advantage of paid pushed news is that it may

disentangle hard news from the infotainment of today's journalism, which permanently mixes hard news and celebrity trivia. People will be open to receiving and paying for unrequested information on their mobile phones provided that it is relevant for them. Irrelevant pushed information, however, will be regarded as intrusive and therefore rejected.

News relevance and different levels of push

The amount, the kind and the frequency of the news individuals want to receive through push technology is totally dependent upon them. There are people who like to stay permanently informed about what is going on, and there are people who prefer to maintain some distance from the events and their reporting. Despite the personal, psychological, sociological and cultural differences among individuals that determine their readiness to accept more or less pushed news on their cellphones, it should be possible to establish a benchmark of relevance for pushed news. The news relevance from the perspective of the push technology applied to cellphones can be measured by the acceptance of the end-user on being alerted. There are different forms of alerting, and according to those forms we can distinguish different levels of push.

In order to analyze the news relevance of news pushed to cellphones, it should be kept in mind that more than a mass communication media, the phones are devices for personal communication. In this respect, it makes sense that we start with looking into how we manage pushed personal communication, namely e-mail and instant messaging. E-mail "as the ultimate push" (Lasica, 1997) is open to all senders and all contents. Its openness led to the abuse of huge amounts of spam that, at a certain point, threatened its own usability. The solution came with powerful filters installed by e-mail providers. But even so, given the limits of the *Time* and attention we have available, it is difficult to cope with all the e-mail that reaches us through these filters. Usually we make a quick evaluation of an e-mail by looking for the sender and the subject, and delete immediately (without opening) the e-mail we consider irrelevant.

Probably the most important aspect in this evaluation is the sender. If he is someone we know and have on our contact list we will read the e-mail, even if the content itself is irrelevant. Secondly, we will look for the subject and see whether it matters to us or not. By combining a sender and a subject analysis, we have a pretty good idea of the relevance of the e-mail received, and we act accordingly. Another important aspect in evaluating the relevance of an e-mail is the particular contexts, specifically *Time* and place, of the receiver. If someone plans to go abroad, it is

possible that he starts to give attention to e-mails that are somehow linked to the country of destination, e-mails that otherwise he would ignore and delete immediately. Multiple and diverse circumstances may change significantly the relevance of an e-mail and the receiver will take these into account. In short, the relevance of e-mails is not something absolute in itself, but something relative.

The way we keep control of push in instant messaging (for instance Microsoft Messenger and Skype) differs a little from how we deal with e-mails. In this case the most important feature of control is the inclusion of someone on our contact list. First of all we can predetermine if anyone, or only people on the contact list, can contact us. If we choose the second option, then people who are not on our list and want to contact us have to ask our permission. In this situation, since it is, like the phone call, a synchronous communication, it is not possible to acknowledge or ignore it depending on the content. As soon as we become engaged in a phone call or in a chat, others are free to talk and push to us whatever information they want. To face the abruptness of calls or chats in the online world we use different status levels of readiness to receive those calls or chats. Skype, for instance, has six different status levels of online presence, ranging from the invitation to be skyped to the invisible status, passing through being away, not available and not to be disturbed. If we choose, for example, the status of being away, then we enjoy some freedom not to answer the request for conversation by one of our contacts.

Even the harshness of the phones´ open receptivity is being dealt with through several measures, namely by the radical temporary turn off, or through the indication of the caller's identity. We can also put the cellphone in silent mode, ignore the call and wait for the answering machine to record the incoming call. But the most common measure to set limits on push communication and information is to keep the cellphone number private. Many people give their cellphone numbers only to close ones, relatives, friends and colleagues. A complete exposure to push information would lead to a fragmentation or even to the annihilation of the receiver's identity.

That said, we can now mention the pushed news that inevitably is coming to our cellphones. There are already different types and intensity levels of push news: SMS, e-mail, twitter and news aggregators (RSS). If we exclude the calls, SMS is the most intensive form of pushing news to smartphones. It is an alert that makes itself perceptible through a warning sound and by appearing on the top of the screen. If one has the phone in silent mode, the device vibrates with the arrival of a new SMS.

But when we do not take notice of its arrival, the SMS will be present on the top of the screen as soon as we use the phone.

The features of SMS clearly include an urgent need to attract the receiver's attention. E-mail is less intrusive. We can set the intervals of push time, from immediately to manually. Usually we do not want to be interrupted each *Time* by the arrival of a new e-mail. Twitter is a very recent format, enabling us to get the news by following a news broadcaster. As a twitter client we can follow easily both the microbloggings of friends and those of our preferred newspapers.

Of all these formats, the news aggregator is the one that has the lowest intensity in the way it attracts our attention. More than a true push technology, it is a convenient digest of our pull habits. Instead of going from site to site among those we often visit, we opt to aggregate those sites in order to see them at a glance.

We can already establish the following principle for usage of push news: there is an inverse relation between intensity and quantity of information pushed to us. Only a very limited number of news items can be pushed urgently to us. The more we want information the less urgent it must be.

A second principle of pushed news on the cellphone is based on its personal nature. We tolerate SMS and e-mails all the more when they are personal, when they address us as unique receivers. Usually we allow only people who are very close to interrupt us at any *Time* with phone calls or SMS. Other people must observe certain rules of privacy and start with forms of communication which are less intense, such as a postal letter or an e-mail. An important corollary follows from this principle. The news that is most fit to be pushed is that which is more personal or close to us. Significantly, BBC's service which sends the latest news through SMS is limited to national news. Cellphones are therefore the promised land of journalism of proximity. Because they touch us, because they may influence our everyday life, we are more open to accept pushed local news items.

Cellphones as a news showcase

The last point I want to mention is the role of cellphones as a news showcase. Ubiquity and perpetuity as the main features of cellphones lead to the situation in which the other forms of news broadcasting will defer to the phones. Today what we know about the world is what we know through the media. Tomorrow we will know the media through cellphones. Accessibility to thousands of online newspapers, radios and TV channels

will be achieved through the information we receive on our cellphones. They are our first direct tool to enter into the immense world of information, telling us what the other media broadcast and when they do it.

Two features of cellphones make them the most suitable devices for becoming our personal digital assistants in the world of news information. To begin with, cellphones are "the first personal mass media" (Ahonen, 2008). Our contacts, agenda and personal messages are stored in our mobiles. If we receive important information through the cellphone, then the tendency is to share it with some of our contacts for whom that information is, in our opinion, also important. News is, by its very nature, social and public. News must circulate among the public and is to be discussed by its audience. "News is more or less authenticated by the fact that it has been exposed to the critical examination of the public to which it is addressed and with whose interests it is concerned." (Park, 1940, p. 679). The easy and quick way of talking about the news pushed to our phones, to comment on and discuss it, is to do so by phone with our contacts. Our first reaction to a news report we consider relevant will be to forward it to the cellphones of colleagues and friends. This is how a mobile communication society will be collectively aware of newsworthy material.

The second feature is cellphone localization. Carrying our cellphones with us permanently, our moves and our locations will be known and therefore taken into account in the selection of pushed news. Not only will the news about weather conditions differ according to our location, but also the news of politics and of social and cultural events will be adjusted to our geographical environment.

NOTES

1 http://news.bbc.co.uk/2/hi/help/5194672.stm (accessed June 17, 2009).

2 "The leadership rating is based on global lead in four criteria: networks, handsets, subscribers and services." Ahonen, 2009, p. 285

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