Impact of the Use of Communication Technologies on the Work-Life Balance of Executive Employees

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ABSTRACT
The Internet, email and mobile communication devices are indispensable today. By creating bridges between work and non-work situations, these technologies appear to contribute to blurring of the boundary between work-family domains. This paper presents the results of an exploratory study assessing the usage patterns of these technologies by executive level employees, and the effect of these technologies on their work-life balance.

Communication technologies are an essential life ingredient to the dwellers of today's fast moving global society. The Internet, emails and portable communication devices[1] such as mobile phones, BlackBerries, and PDAs form a technology group that has blended itself well into everyday lives of the global community. Enabled by such technologies, the generic slogan of "anytime, anywhere, and availability at the press of a button" captures the current work culture trend.

Canada, US and UK have reported that managers worked longer hours and experienced a sense of "working high speed" all the time as reported by HRDC (2005), Patel (2002), and Guest (2002) respectively. This appears as a worldwide trend both in developing and developed countries (Bell & Hart, 1999; Black & Lynch, 2001; Guest, 2002; Healy, 2000). While some employees enjoy compensation for the extended work hours and their 24/7 accessibility, for most executives, who are not covered by the overtime legislation (US_Department_of_Labor, 2006), these extra hours are just an extension of their work demands. The *ICT cluster* seems to be adding on to the virtual hours worked.

Extended work hours are reported to have an adverse impact on work-life balance of employees (Chesley, 2005; Gutek et al., 1991; Parasuraman & Simmers, 2001) and on employee health (Sparks et al., 1997). There is a growing concern on the ability of communication technologies to create an "e-leash" on employees (Rothberg, 2006). Addiction to these technologies is considered comparable to drug addiction (McIntyre, 2006). With increasing concerns on the deteriorating quality of home and family life leading to a variety of social problems, the concept of work-life balance has drown the attention of the workforce, employers, and public policy makers. Therefore, it would be important to assess the true impact of the *ICT cluster* on the work-life balance of modern employees.

Recent literature analyzed the usage patterns of mobile devices addressing diverse issues (Arnold, 2003; Chesley, 2005; Churchill & Munro, 2001; Jarvenpaa & Lang, 2005; Perry et al., 2001; Schlosser, 2002). Schlosser (2002) focused on the meanings assigned by employees to mobile devices while the paradoxes of mobile usage were addressed by Jarvenpaa and Lang (2005). Research has also addressed the concepts of "anytime, anywhere" in the context of teleworking (Nath & Chen, 2005; Perry et al., 2001; Venkatesh et al., 2003).

The current paper contributes by responding to a call for a better understanding of the use of technology (Orlikowski, 2000) by presenting an empirical analysis of the usage patterns of a cluster of communication technologies which are critical to modern employees, and their impact on employee work-life balance. The study aims to address following research questions:

- How do employees actually use the *ICT cluster*? Are there usage differences within the cluster?
- What is the role played by the *ICT cluster* in managing employee work-life balance?
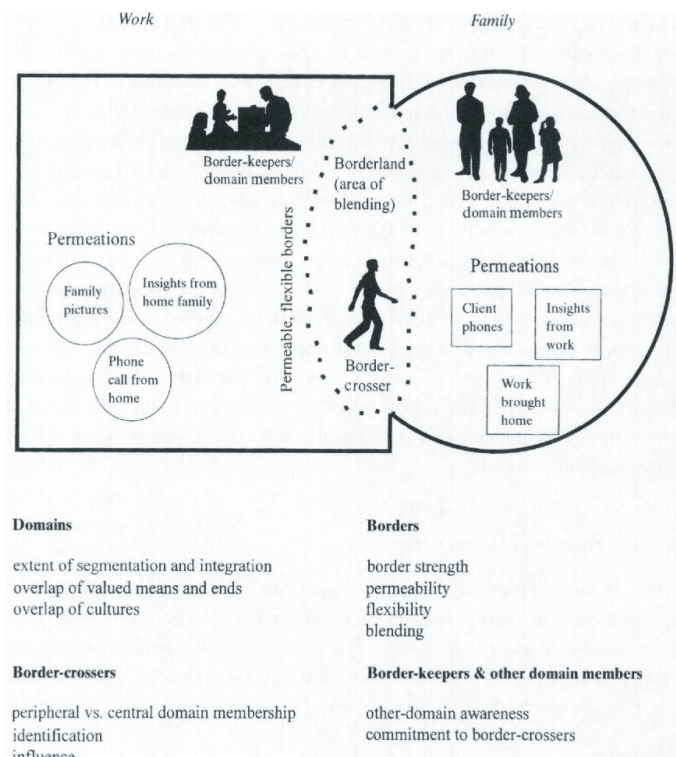- Do these technologies facilitate a growing blurring of work life and private life, or have employees managed to keep them separate?

THEORETICAL BACKGROUND
The recent explosion of interest in the work-family interface has produced several conceptual frameworks to explain the relationship between these two spheres of life (Greenhaus et al., 2003; Guest, 2002; Gutek et al., 1991; Zedeck & Mosier, 1990). Greenhaus et al. (2003) defined work-family balance as "the extent to which an individual is equally engaged in – and equally satisfied with – his or her work role and family role" (p.513). They proposed three components of work-family balance as time, involvement, and satisfaction, and emphasized the need to have equal weight in work and family roles in each of these components.

In the traditional perspective of work-life balance Zedeck and Mosier (1990) identified five models of representation. *Spillover model* assumes that there are no boundaries in one's behaviour between work and non-work situations and asserts

Figure 1. Work-family border theory: list of central concepts and their characteristics (Clark, 2000, p.754)

Domains		Borders	
extent of segmentation and integration		border strength	
overlap of valued means and ends		permeability	
overlap of cultures		flexibility	
		blending	
Border-crossers		**Border-keepers & other domain members**	
peripheral vs. central domain membership		other-domain awareness	
identification		commitment to border-crossers	
influence			

that there is similarity between the occurrences in work and family environments. *Compensation model* proposes an inverse relationship between work and family such that work and non-work experiences tend to be antithetical (Staines, 1980). *Segmentation model* hypothesizes that work and non-work are distinct domains of life and individuals can function in each domain without influencing the other. The separation in time, space and function allowed individuals to neatly compartmentalize their lives. *Instrumental model* suggests that activities in one environment will facilitate success in the other. Work outcomes would lead to good family life and life's pleasures. *Conflict model* proposes that the two environments are incompatible with distinct norms, and requirements of one environment entail sacrifices in the other (Zedeck & Mosier, 1990).

Clark (2000) argued that people are daily border-crossers between work and family domains. Although many aspects of work and family are difficult to alter, individuals can shape to some degree the nature of work and home domains and create bridges to attain the desired balance. He provided a pictorial representation of the work-family border theory shown in Figure-1.

The increased usage the *ICT cluster* has enabled location independent working and 24/7 contactability to employees creating 'permeations' across work-family borders. These technologies facilitate border crossings between work and family domains even when the individual is physically in the other domain.

The current research examines the role of the *ICT cluster* as a facilitator for this boundary blurring phenomenon between work and family domains, based on a sample of 26 executive level employees. It also examined how these technologies influenced individuals in achieving their time, involvement and satisfaction balance in work and family roles.

METHOD
The study sample comprised of executive level employees who are usually not covered by overtime legislations and not compensated for additional work time. They would have higher autonomy at work with more cognitive work demands, fulfilling supervisory responsibilities and overseeing the operation of business units or processes. These criteria enable the performance of a portion of job related duties outside work premises and work-time. Initial participants were selected based on available contacts, focusing on the users of the *ICT cluster* and preferably with family commitments. Snowballing technique[2] was used to recruit additional participants for the study. Table-1 summarizes the participant details. The age of participants ranged from 25 to 60 years with 73% of them in the age group 30- 45 years.

Participants were initially contacted through email or telephone. Interviews were held at a location chosen by the interviewees and lasted approximately an hour. Semi-structured interviews were guided by the research questions. The two-way face-to-face communication approach allowed a rich flow of ideas from the participants. Transcribed interviews were coded for common topics which formed the basis of analysis.

Table 1. Participant details

Industries	No of participants	Male	Female
Telecommunication	6	5	1
Railways	1	1	
Manufacturing	1	1	
Banking & Finance	3	2	1
IT/ Software	5	3	2
Legal	1	1	
Education	3	2	1
Consultancy	3	1	2
Chemical Engineering	1		1
Energy	2	2	
TOTAL	26	18	8
Average Age	36.4 years		
Standard Deviation of Age	8.4 years		

THE RESULTS
How Do People Actually Use These Devices?
(a) Emails
Irrespective of the industry all participants highlighted the importance of emails in their work life, identifying it as the main mode of communication at the work place. They used phrases such as, '*indispensable*', '*very crucial*', '*something we cannot live without*', '*my worklife virtually revolves around emails*', '*the work culture in my company is predominantly email driven*', in describing the importance attached to emails at work.

All participants had employer provided email facilities and had remote access to it. However, the majority of the participants maintained separate personal email accounts, and frequently used employer provided Internet facilities in accessing them. Heavy users of emails-at-work claimed to receive over 100 work related emails and spend about 1.5-2.5 hours daily on emails; which amounted to about 15% to 25% of the daily work time. Compared to work-related emails, personal emails were a negligible proportion of 5% to 10%.

(b) The Internet
The use of Internet in work activities mainly depended on the type of occupation. Internet was widely used for research, and participants frequently commented on the '*tremendous time saving ability of the Internet*'. Participants from the software industry highlighted other Internet based technologies such as VOIP (Voice over Internet Protocol) and IM (instant messaging) to be of importance. Many software firms used these services with instant and real-time access to coordinate with overseas partners. Programmes such as MSN Messnger, Skype, and Yahoo Messenger were used to communicate with project teams across the globe and across the room. These IM services performed an important role in maintaining both work and non-work relationships.

Many individuals, who had some form of post graduate studies, highlighted the importance of Internet for education related research as a non-work activity. All individuals had Internet access at home at least through a dial-up facility, but used employer provided Internet access for personal use too. News, sports, banking are some other personal uses of the Internet. Many individuals were not comfortable with using Credit Cards over the Internet.

(c) Mobile Communication Devices (Cellular Phone/ BlackBerry)
Compared to the widespread popularity of cellular phones, BlackBerry use was not prominent. All participants used cellular phones but only two BlackBerry users were in the selected group. In most cases, employers either provided the cellular device, or bore at least portion of the monthly cost. In contrast to the Internet and email technologies, cellular phones played an equally important role in non-working lives of these individuals. They commented:

"I can't even think of a life without a mobile phone. ... Everything is a phone call away from me."

"When you are on such a busy work schedule, how you interlink your family pressures predominantly depends on the mobile phone. By being on the mobile phone you are able to put things together, remotely ... with a schedule of this nature, it is something that you cannot do without."

Participants with a technical background, or in a technology related field tend to use the additional features such as text messaging in a cellular phone. Non-technical and older participants used the devices primarily for voice communication. The users of the additional services appreciated them immensely:

"I think text messaging is a very neat way of not invading into privacy of people. If you don't want to talk but still want to send a message, then just send SMS. Therefore I think SMS really enhance the mobile phone service."

"If you think of MMS (multimedia messaging service), then it is again cool. For example I have a friend with whom I go shopping and we know each other's preferences. So for example when I am in Singapore, I see a nice top, I quickly

take few pictures with prices and send a MMS. She will respond immediately. It is cheaper than a call and we get the work done very satisfactorily".

Many participants exploited ability to be on the phone while on the move, especially in commuting to work:

"I switch on my mobile phone in the morning and would check for any missed calls and send some SMS and make some of the calls while going to office. I do have a driver in the mornings."

"I use the commute time from home to office to make some of the personal calls. I usually drive with a phone conversation or typing a SMS. I don't know if this is good or bad, but I feel it makes me efficient."

"Sometimes while driving to work I would call my support guys to see if there are any issues that need attention, or if I have something in my mind which needs to be looked into. This gives me a head start before I get to the office."

Extended Work Hours: Do These Devices Add to the Work Time?
All participants revealed demanding work schedules requiring them to work beyond the normal 8 hours, to work from home, during weekends and at night. Describing a typical day in their lives, many individuals admitted to checking work emails before going to bed and having the cellular phone on throughout the night to be contactable 24/7.

A divisional manager in a telecommunication company commented:

"My primary task is to provide this infrastructure, and the problem is when there are issues on the system, my staff is the second line of support…. Lately I would say that, thank God I am able to sleep at night. But if I turn back the clock, when I was down the ladder, then I used to be around 24/7 whenever there is an issue. But still I am available over the phone any time of the day."

Another participant commented:

"If you are in the middle of an important project, your might get a call saying that a report has been emailed to you and some feedback is required urgently. So you would just log in to your emails even late at night and see what can be done before you start work next day."

Not all participants agreed on role of technology in extending their work hours. A lawyer commented:

" think the demands of my practice are responsible for that and not the technologies. It would be the same with or without the technologies. But I would view all these technologies as largely positive and since I believe I have a control of them they truly help me in managing my work more efficiently."

Creating Permeable Borders: Work-Family and Family-Work Spillover
Most participants preferred to have a thick border between work and non-work situations. However, work demands have made it difficult to maintain this separation. Research results revealed that the *ICT cluster* played a key role in creating permeable borders between the two domains of work and family. In describing the interactivity of the two domains participants frequently used terms such as *interwoven, overlapping, and interconnected.*

Participants broadly accepted that more work-to-nonwork spillover is present compared to the reverse direction. The main spillover from non-work to work was through cellular phones when it was used in family related matters. This was regarded positively as a means of empowerment since it enabled, for example, the parents to keep track of their children, and attend to household activities through third party intervention. This was described as equipping according to the life style:

"…[cellular phone] is an asset to the lives of people like us. Since we have chosen this life style, we need the necessary equipment to live this life efficiently.

The cases of extended work hours and teleworking described above are classic examples of work-life spilling over to the non-work. However, several individuals considered this as a positive attribute since it allowed them to be present at home while attending to work matters:

"Because of our work assignments, my wife and I live in different locations. So if I start using my laptop when I am with her, then she will definitely complain and grumble. But on the other hand, technology enables me to be with her and work at the same time. And the fact that I have the mobile phone and I can talk to her all the time and she can have access to me anytime is crucial. Without that our lives would have been very difficult."

Described the nature of spillover effect of work and non-work situations, a participant had the following comment to make:

"I work a lot from home and it is possible because I have access to systems through the Internet. This helps me to attend to family matters as and when required. I think my work and family activities are so interwoven and I am almost like a butterfly going from flower to flower- I go from chore to chore, and they could be either family or work related."

Not all were in favour of technology enabled blurred boundaries phenomena. Some participants commented about the invasion of privacy, and the ability of the work life to creep into the family life with the 24/7 accessibility:

"I feel as if I am trapped sometimes and I can't get away and have some peace because of the mobile phone. Yes, I can switch it off, but then, there are situations where you need to have it on."

DISCUSSION AND CONCLUSION
Analyzing the usage patterns of the *ICT cluster* revealed emails to be the most work-centric technology. Although emails may not be critical to all spheres of employment, for the selected executive level employees, emails were the crucial technology in their work life. Cellular phone, the easiest mode for 24/7 connectivity, was recognized as the technology with the strongest association with non-work life. Internet in work and non-work activities depended on each individual and the industry involved.

Providing 24/7 seamless accessibility and ability to attend to work related matters off-worksite and off-working hours, the *ICT cluster* is adding onto work hours of these employees. By blurring the work-family boundary these technologies create spillover in both directions, work-to-family and vise versa. Clark's model (2000) identified these as   permeations. Thus, these technologies are facilitating border crossing of individuals between the two domains of work and family.

The study revealed that how people perceived and achieved their work-like balance is very individual-specific and does not necessarily have *equal* distribution of time, involvement and satisfaction in work and family roles. This was in contrast to the definition provided by Greenhaus et al. (2003) in specifying "equal" time, involvement and satisfaction balance. Further, it was observed that an individual could fit into any (one or more) of the five work-life balance models[3] (Zedeck and Mosier (1990) based on their age, industry and individual perception.

Chesley (2005) suggested that cellular phone usage created more spillover compared to computer technology usage. According to the current study, cell phone usage led to more family-to-work spillover. Considering work-to-family spillover, a cellular phone use could act as the sole 'border permeation' or initiate the spillover process with the use of other technologies. For example, an employee could get a call asking him to respond to an urgent email. Although there were only a few users in the study sample, BlackBerry is a device gaining user popularity (Reuteres, 2006). Compared to cellular phones, BlackBerry is equipped to receive emails on the move, anywhere, anytime. Since emails were identified as the most work centric technology by the participants, in the future,

BlackBerry may be recognized as the device creating the greatest amount of spillover in work- family domains.

Convergence of several technologies to miniaturized handheld devices is the current trend (Edur, 2000; Johnson, 2005). However, current research suggests that different functionalities associated with these technologies could have differing impacts on work-life balance. Therefore, future researchers assessing the impact of these convergent technological devices would have to make a distinction among the functionality of these gadgets to correctly ascertain the true impact on individuals. Considering it as a single device may not reveal the intricate details of the impact of each technology within the bundle.

Technology usage varied based on type of industry and the age of participants. Many studies have suggested that women tend to emphasize their family roles more than men (Gutek et al., 1991; Rothausen, 1999; Wharton & Blair-Loy, 2006). Thus it was expected to see a significant gender difference in the usage patterns of these technologies. It was seen that there was a difference in the perceived value towards cellular phone; females perceived it as a security feature compared to men. Other usage patterns didn't highlight any significant differences. This could be due to the increasingly similar roles men and women have in their organizations, resulting in both groups using the technology in a similar manner. On the other hand, the sample of the current study was limited in size, especially in terms of female participation. Therefore, future research could address this issue further. The participants represented a wide range of industries. However, the smaller sample size restricts a wide spread generalization of the results.

Work-life balance of citizens has become an important theoretical, practical, and policy issue. In an era where communication technologies are blurring the boundaries between work and home life, this research provides empirical evidence based on a qualitative assessment of the use of these technologies and their impact on work-life balance of executive level employees. Since different functionalities of the technologies have different implications on the work-life balance issue, the study also suggests that future research should pay attention to these differences rather than simply bundling them together.

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ENDNOTE

[1] The group of technologies (the internet, email and portable communication devices) is referred to as the *"ICT cluster"*.

[2] Initial participants introduced more participants for the study

[3] Spillover Model, Compensation Model, Segmentation Model, Instrumental Mode, and Conflict model (Zedeck and Mosier (1990))

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