Managing Geographically Dispersed Teams: From Temporary to Permanent Global Virtual Teams

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The rise and spread of information communication technologies (ICT) has enabled increasing use of geographically dispersed work teams (Global Virtual Teams). Originally, Global Virtual Teams were mainly organised into temporary projects. Little research has focused on the emergent challenge for organisations to move towards establishing permanent Global Virtual Teams in order to leverage knowledge sharing and cooperation across distance. To close this gap, this paper will set the scene for a research project investigating the changed preconditions for organisations. As daily face-to-face communication is not the basis for developing manager-subordinate, as well as member-member relations, the development of teams to work together efficiently and effectively in a virtual setting has often been neglected. Part of this discussion are the changed parameters in relation to increasing global competition; a new generation of self-lead digital natives, who are already practising virtual relationships and a new approach to work, and currently joining the global workforce; and improved communication technologies.

Keywords: Global Virtual teams, ICT, leadership, motivation, self-management, millenials.

INTRODUCTION

Since the first mentioning of the word "globalization" in a US dictionary in 1951, the US Library of Congress has since 2000 on average listed more than 1000 publications on the phenomenon every year (Phemawat, 2011). With a double meaning of "increase in international exchange of goods, services, money" as well as "growing similarity of laws, rules, norm, values and ideas" (Dess, Lumpkin & Eisner, 2010, p. 235), globalization is on the agenda of managers everywhere in an increasingly dynamic global market place (IBM Institute for Business Value, 2010). In a research among more than 700 Chief Human Resource Managers from corporations worldwide, IBM Institute for Business Value (2010) identified three key HR issues for the future: Shortage of creative leaders; Inability to rapidly develop workforce skills and capabilities; and Ineffective collaboration and knowledge sharing.

Despite being identified as a key future issue, global organizations are already trying to improve collaboration and knowledge sharing by leveraging resources across geographies. Examples are large global organizations such as IBM, SAP, GE that all have set up centers of excellence in different locations, especially in the area of R&D, thereby forming Global Virtual Teams to leverage knowledge sharing despite geographical distance (Siebdrat, Hoegl & Ernst, 2009).

A geographically dispersed team– often referred to as Global Virtual Teams (Siebdrat, Hoegl & Ernst, 2009) – is a team where team members rarely – or never – meet face-to-face (Cascio & Shurygailo, 2003). A Global Virtual Team is a team that is dispersed by distance; distance which may be in the form of geography, organization, time, culture, and/or language, and the

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team's main form of corporation is based on using communication technologies (Zigurs, 2003; Daim *et al.*, In Press). Global Virtual Teams range in *level* of dispersion: from being separated by different floors in the same building to being separated by continents (Siebdrat, Hoegl & Ernst, 2009); in *degree* of "virtuality": from highly to minimally virtual – i.e. from team members meeting almost never to meeting from time to time (Kirkman *et al.*, 2003); and in *type* of configuration: From all members in different locations to most members in same location and just a few or one in separate locations (Siebdrat, Hoegl & Ernst, 2009).

	Participants in Same Place	Participants in Different Place
Collaborate at same time	Meet in same physical room Whiteboard	Videoconference / telepresence Audio/web conference Electronic white boards Electronic easels IM / Chat
Collaborate at different time	Team meeting room in virtual space Hard copy bulletin board	Team meeting room in virtual space Email, fax, FedEx, and postal mail

Table 1: Collaboration forms by timing and location: Dispersed versus Colocated (Wainhouse Research LLC, 2010b, pp. 4)

Working together over distance represents a number of issues; issues that may also be found in colocated teams, but issues that will be magnified due to dispersion:

- **Trust** (Furst *et al.*, 2004; Rosen, Furst & Blackburn, 2007; Lee-Kelley & Sankey, 2008; Ebrahim, Ahmed & Taha, 2009; Siebdrat, Hoegl & Ernst, 2009);

- **coordination of work** (Furst *et al.*, 2004; Rosen, Furst & Blackburn, 2007; Ebrahim, Ahmed & Taha, 2009; Siebdrat, Hoegl & Ernst, 2009);

- **conflict** (Furst *et al.*, 2004; Rosen, Furst & Blackburn, 2007; Ebrahim, Ahmed & Taha, 2009; Siebdrat, Hoegl & Ernst, 2009; Daim *et al.*, In Press);

- **culture** (Rosen, Furst & Blackburn, 2007; Lee-Kelley & Sankey, 2008; Siebdrat, Hoegl & Ernst, 2009; Daim *et al.*, In Press);

- **communication technology** (Furst *et al.*, 2004; Rosen, Furst & Blackburn, 2007).

Despite the potential difficulties facing Global Virtual Teams, the setting up of this new organisational structure may support organisations in reaching a number of corporate objectives such as: to recruit employees with the right skills but who may not want to move (Cascio & Shurygailo, 2003); integration of employees following an acquisition (Cascio & Shurygailo, 2003); need to cut travel cost and optimize time management (Bennett, 2011); leverage round-the-clock customer service (Kankanhalli, Tan & Wei, 2007); increasing demands for reducing organizational carbon foot print (Wainhouse Research LLC, 2010b); and demand for better life/work balance and integration (Meister & Willyerd, 2010b).

In the US alone this development has led to the number of teleworkers – employees working from home or another remote location at least 1 day per month – accounting for almost 20% of the US working adult population in 2011 (WorldatWork group, 2011).

Facilitating the increased use of Global Virtual Teams is the combination of a new type of employees and the continuous quality improvement and price reduction of communication technologies. Organisations are now recruiting employees of Generation Y or the Millennium Generation – those born between 1977 – 1998 (Thiefoldt & Scheef, 2004). A generation also called the digital natives, who are "native speakers of the digital language of computers, video games and the Internet" (Prensky, 2001, pp. 1). This generation, who "grew up on the Internet" (Trunk, 2007), is not using technology, but *assuming* technology (Thiefoldt & Scheef, 2004), and use it for communication with friends and knowledge management in every sense. And with the relatively new concepts of telepresence and unified communication (Wainhouse Research LLC, 2010b), making the use of digital communications technology increasingly "natural" by incorporating elements of face-to-face communication (Daim *et al.*,

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In Press), organisations have the platform in place for further leveraging knowledge sharing across distance.

BACKGROUND

As described in the introduction, Global Virtual Teams face some of the same issues as co-located teams. However, because of the dispersion these issues need special organisational attention. Also, having managerial- and/or leadership responsibility of a Global Virtual Team represents new challenges for organisations as well as leaders. These include team development, leadership and motivation.

A group is a number of people who are working towards a common goal while interacting and communicating with each other (Levi, 2011). The difference between the definition of a group and a team is being discussed by many academics, but one difference that is often agreed to is that where the group has a clearly defined group leader, in the team "all are accountable" and leadership is shared (Huczynski & Buchanan, 2007; Levi, 2011).

Team development has been described by Tuckerman using five stages of development: Forming, Norming, Storming, Performing and Adjourning (Furst *et al.*, 2004; Huczynski & Buchanan, 2007). In theory Global Virtual Teams follow the same development, but due to the characteristics of different kinds of dispersion, Global Virtual Teams face other challenges than collocated teams in the different phases. These include slower development of trust in forming stage; risk of misunderstandings in storming phase due to less rich communication channels compared to face-to-face meetings; difficulties in establishing norms for cooperation and communication during norming phase; and competing pressures from local assignments during performing stage (Furst *et al.*, 2004).

With a definition of leadership being "an influencing process aimed at goal achievement", theory of leadership has historically developed from focusing on personal traits, over

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contingency thinking to distributed leadership (Huczynski & Buchanan, 2007). Traditional leadership positions were connected with hierarchy and symbolism, whereas today's leaders must lead from the distance assigning autonomy to the team rather than controlling team activities, and in a successful Global Virtual Teams leadership itself becomes a team effort (Zigurs, 2003). This will not reduce the leadership responsibility, but add new aspects: selecting the right combination and use of communication technologies; designing processes and "netiqettes" for securing optimal communication between team members (Levi, 2011); and in general secure optimal working conditions for team empowerment (Daim *et al.*, In Press). Or even re-define leadership as in the words of Zigurs (2003, pp. 347): "Whether you call it self-leadership, emergent leadership, shared leadership or transformational leadership, we believe that virtual teams provide a unique opportunity for redefining the concept of leadership."

Motivation is another key aspect for Global Virtual Teams. As team members may face issues of isolation and only remote access to team members, motivation is not only a leadership responsibility but also a personal issue. Moving away from economic man thinking during scientific management and discussions about reward/punishment (Bloisi, Cook & Hunsaker, 2007), Daniel Pink (2011) is suggesting a new approach to motivation adapted to the work force of the 21th century. Pink (2011) updates the perception of motivation and by studying motivation research through time, he defines 3 waves of motivation development: Motivation 1.0 was motivation to survive. Motivation 2.0 is focused on punishment/reward, intrinsic and extrinsic motivation, and includes work from scholars such as McGregor, Herzberg and Maslow.

Pink (2011) argues that modern organisations need to upgrade to Motivation 3, based on 21th workforce requirements for autonomy, mastery and purpose. His argument is that most of today's organizational tasks require creative thinking, are "heuristic" in their nature and are

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more complex, interesting and self-directed than "algorithmic" tasks, which need to follow established instructions towards a single solution. Algorithmic tasks can be – and are increasingly so – automated and completed using software, leaving organisations and leaders to optimize results by creating the framework for letting employees work according to Motivation 3.0.

GLOBAL VIRTUAL TEAMS

During the past decade Global Virtual Teams have been researched extensively, and a focus area has been the issues facing Global Virtual Teams in comparison to traditional, collocated teams (Ebrahim, Ahmed & Taha, 2009). Distance and lack of (frequent) face-to-face communication are the main differences between these two types of teams and causing the below issues.

Trust is an issue mentioned frequently, especially as it may be more difficult and take longer time to develop trust among team members that do not know each other and do not meet in other non-work related situations such as around the coffee machine or during lunch (Furst *et al.*, 2004; Lee-Kelley & Sankey, 2008; Siebdrat, Hoegl & Ernst, 2009). With no trust or even mistrust among team members, team working in general and knowledge sharing in particular becomes a problem (Rosen, Furst & Blackburn, 2007).

Logistical problems such as **Coordination of work** may severely influence the success of a Global Virtual Teams. When working across many time zones it may be difficult to arrange meetings within usual working hours for all participants (Furst *et al.*, 2004), and if there are frequent delays in responses and feedback, communication may break down (Kankanhalli, Tan & Wei, 2007; Ebrahim, Ahmed & Taha, 2009; Siebdrat, Hoegl & Ernst, 2009). Another issue is the task of planning Global Virtual Teams projects so they do not conflict with local deadlines and responsibilities (Rosen, Furst & Blackburn, 2007).

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Difficulties to establish working relationships and common ground may lead to team **conflicts,** defined as disagreement and incompatible goals or interest (Kankanhalli, Tan & Wei, 2007). Anxiety, confusion and miscommunication (Daim *et al.*, In Press) may further complicate the team work and lead to power struggles and conflicts (Rosen, Furst & Blackburn, 2007).

Differences in **culture** is a key issue for most Global Virtual Teams and requires understanding and knowledge of each other in the team (Rosen, Furst & Blackburn, 2007). Differences in different cultural backgrounds such as behaviour, values, and language may have severe influence on the ability to communicate and create understanding (Siebdrat, Hoegl & Ernst, 2009), but also differences in organisational and functional backgrounds and experiences are important aspects to be aware of (Lee-Kelley & Sankey, 2008; Daim *et al.*, In Press).

Finally the issue of using **communications technology** is influencing the way Global Virtual Teams work and develop. Basing communication and cooperation on technology instead of to face-to-face communication may lead to difficulties such as communicating contextual information; difficulties in communicating information evenly to all team members; and differences in speed of access to information (Kankanhalli, Tan & Wei, 2007). Of major importance is therefore that all team members learn and have access to using technology (Furst *et al.*, 2004), and that they are able to break with old traditional communication patterns and use the new technological options to share knowledge (Rosen, Furst & Blackburn, 2007).

Having reviewed the issues faced by Global Virtual Teams, a number of academic articles have developed recommendations on how to prepare organisations for working together virtually and in particular how to improve leadership and knowledge sharing.

Ironically, many researchers mention the importance of **face-to-face meetings**, especially in the start-up phase, to build trust and establish common ground for the future success of the virtual team (Kirkman *et al.*, 2003; Zigurs, 2003; Furst *et al.*, 2004; Siebdrat, Hoegl & Ernst, 2009). It is important that Global Virtual Teams are formed not only based on the specialist skills of the team members, but also **team skills and technological skills** must be taken into consideration and further trained with special focus on teams in a virtual setting (Kirkman *et al.*, 2003; Zigurs, 2003; Siebdrat, Hoegl & Ernst, 2009). Detailed protocols and **standards for communication** in general and for conducting meetings in particular are important to optimize team efficiency, to avoid misunderstandings and to secure engagement from all team members (Cascio & Shurygailo, 2003; Zigurs, 2003; Furst *et al.*, 2004; Daim *et al.*, In Press). **Leadership** responsibilities for Global Virtual Teams include formulation of clear mission, team roles and the specific task; timely and regular feedback to build team trust and commitment; handling of conflicts between local and global responsibilities and deadlines; defining right mix of technologies to be used; promotion of self-leadership and team empowerment; and being a knowledge sharing role model (Kirkman *et al.*, 2003; Zigurs, 2003; Furst *et al.*, 2004; Ebrahim, Ahmed & Taha, 2009; Siebdrat, Hoegl & Ernst, 2009). Finally, the importance of establishing a **global organisational culture** is underlined, including knowledge of and skills in working with team members from different national cultures (Furst *et al.*, 2004; Rosen, Furst & Blackburn, 2007; Siebdrat, Hoegl & Ernst, 2009).

PERMANENT GLOBAL VIRTUAL TEAMS

Global Virtual Teams were initially formed to increase organisational speed and flexibility by leveraging organisational resources across geographies. Particularly pressing was the need for leveraging specialist skills, and the concept of Global Virtual Teams were used to set up global virtual R&D teams (Boutellier, Gassmann & von Zedtwitz, 1999). The main part of current research discussed earlier therefore focuses on virtual teams as being project teams,

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i.e. temporary teams (Furst *et al.*, 2004; Lee-Kelley & Sankey, 2008; Daim *et al.*, In Press). Ebrahim, Ahmed & Taha (2009, pp. 2655) in their literature review even conclude that a common criterion of virtual teams is that "it is not a permanent team."

This paper theorises that in the coming years, organisations will increasingly rely on building *permanent* Global Virtual Teams. With an increasing degree of globalisation; with organisations outsourcing and building networks with partners; with organisations joining through mergers and acquisitions across national boundaries; organisations will have to – or have already – established lines of reference between dispersed team members in permanent organisational structures. Two trends are facilitating and encouraging organizations to form permanent Global Virtual Teams:

Improvement of communication technology

Within the framework of on-going improvement of quality and reduction in the price of communication technologies (Bennett, 2011), electronic collaboration tools such as e.g. e-mail have been used in organisations since around 1990 (Wainhouse Research LLC, 2010b). A number of articles published during the first years of the new millennium mention focus on inability of communications technology to simulate face-to-face communication as being a major issue for teams being unsuccessful in establishing trust: Reliance on electronic communications increases potential for faulty first impressions (based on study from 1992) (Furst *et al.*, 2004); Use of communication technologies may prolong conflicts, as misunderstandings occur more readily because the missing of face-to-face communication means lack of contextual signs such as lack of body language, tone of voice, facial expressions (Furst *et al.*, 2004); and a conclusion made in 2002 that "technology is still not available at a suitable price and capability to duplicate face-to-face communication" (Zigurs, 2003, pp. 344).

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However, as system and network technologies have advanced, the "levels of "connectiveness" have improved dramatically and the range of applications has exploded" (Wainhouse Research LLC, 2010b, pp. 3).The communications industry now talks not only of videoconferencing but *telepresence* and *immersive video solutions*. High scale telepresence solutions include same décor and furniture on both sides of the screen, creating the illusion of meeting participants being in the same room (Wainhouse Research LLC, 2010b).

Another aspect of improved communications technologies is the concept of "Unified communications (UC)". UC systems use a combination of voice, video, instant messaging or web conferencing, all integrated into a solution with an optimised user interface. A key element in UC is the concept of "presence", a visual indicator to show if people are busy, in a meeting, out-of-office etc. (Wainhouse Research LLC, 2010a). All are elements of improving communication across distance by facilitating immediate response from team members. IDC research among small and midsize US organisations shows that more than 38% and almost 75% respectively currently use at least one type of UC technology (Jaffe & Boggs, 2011).

The advantages of the most recent communications technology development is confirmed by newer research (Daim *et al.*, In Press) that recommends leaders to choose the optimal mix of e-corporation tools for their Global Virtual Teams, select electronic media that the team members find "natural" and thereby easy to use, in order to improve knowledge sharing and quality of team outcome. In other words, communications technology is increasingly (virtually) shortening the distance between team members and forming the basis for the establishment of permanent Global Virtual Teams.

The millennials

The millennial generation entering the workforce these years – and accounting for 50% of the workforce in the US by 2020 (Meister & Willyerd, 2010a) – grew up with technologies and

are skilled in multitasking. Their behaviour and lifestyle being constantly connected via internet to friends and sources of knowledge and entertainment has led to a situation where research is discussing whether their brains have physically changed compared to the previous generation (Prensky, 2001). Pedró (2006) even characterises them as "real gourmand consumers of digital media" as they do not only assume technologies but also expect high quality of media. Millennials do not see life and work as separate activities; they take flexible work schedules for granted, and want to learn self-management (Meister & Willyerd, 2010).

Organisations will leverage that these millennials – the digital natives - will not only take permanent Global Virtual Teams as a given, a continuation of the way they have always communicated with contacts in their networks. They also have the qualifications and experience to overcome some of the known issues facing Global Virtual Teams and when working with their older colleagues, the digital immigrants, organizations may leverage what could be defined as "reverse mentoring": a younger mentor will teach a senior colleague on how to work and live in the digital world (Meister & Willyerd, 2010).

If also Pink is right that they are motivated by autonomy, mastery and purpose (Pink, 2011), organisations will experience a whole new approach to working virtually and hopefully a higher level of success for these teams.

CONCLUSION AND FURTHER RESEARCH

The concept of Global Virtual Teams has formed since the end of the 1990s, made possible by communications technologies, and made necessary by increasing demands for globalisation and business optimisation. Current research on Global Virtual Teams has focused on Global Virtual Teams being temporary project teams, staffed by employees with selected specialist skills, as well as the issues facing Global Virtual Teams compared to colocated teams and how to deal with those issues.

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Influencing the success of Global Virtual Teams are areas such as team development, leadership and motivation; all areas of study that are changing over time and with influence on how organisations optimise and leverage organisational resources across distance. Due to advances in communications technologies as well as the emergence of the digital native generation with a new approach to working virtually, this paper has theorised how organisations will move toward establishing permanent Global Virtual Teams. To establish whether the establishment of permanent Global Virtual Teams is actually taking place, further research is suggested:

What is the **current situation as of spring 2012**: To what degree do selected organisations work in Global Virtual Teams? Do they form temporary or permanent Global Virtual Teams or both?

Preparation for working in Global Virtual Teams: How do the selected organisations prepare their employees – leaders as well as followers - for working virtually? Have they established training for the issues that make virtual team work different from working in colocated teams? How do they enable efficient use of collaborative communication technologies?

Staffing of Global Virtual Teams: To what degree are team members selected for Global Virtual Teams based on their technical skills/organizational position only? Are personal and social team skills considered?

Influence of the millenials: How do the selected organisations experience a changed approach to working in virtual teams due to the digital natives entering the organisation?

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REFERENCES

Bennett, D. (2011) 'I'll have my robots talk to your robots', *Bloomberg Businessweek*, 21 - 27 February 2011, pp. 52-59.

Bloisi, W., Cook, C. W. & Hunsaker, P. L. (2007) *Management & Organisational Behaviour*. 2nd European edn. Maidenhead: McGraw-Hill Education.

Boutellier, R., Gassmann, O. & von Zedtwitz, M. (1999) *Managing Global Innovation*. Heidelberg: Springer.

Cascio, W. F. & Shurygailo, S. (2003) 'E-Leadership and Virtual Teams', *Organizational Dynamics,* 31 (4), pp. 362-376.

Daim, T. U., Ha, A., Reutiman, S., Hughes, B., Pathak, U., Bynum, W. & Bhatla, A. (In Press) 'Exploring the communication breakdown in global virtual teams', *International Journal of Project Management,* [Online]. Available at: http://www.sciencedirect.com/science/article/pii/S0263786311000779 (Accessed: 22. December 2011).

Dess, G. G., Lumpkin, G. T. & Eisner, A. B. (2010) *Strategic Management*. 5th edn. New York, NY: McGraw-Hill Irwin Companies.

Ebrahim, N. A., Ahmed, S. & Taha, Z. (2009) 'Virtual Teams: A Literature Review', *Australian Journal of Basic and Applied Sciences,* 3 (3), pp. 2653-2669.

Furst, S. A., Reeves, M., Rosen, B. & Blackburn, R. S. (2004) 'Managing the Life Cycle of Virtual Teams ', *The Academy of Management Executive,* 18 (2), pp. 6-20

Huczynski, A. A. & Buchanan, D. A. (2007) *Organizational behaviour*. 6th edn. London: FT Prentice Hall.

IBM Institute for Business Value (2010) *Working beyond Borders: Insights from the Global Chief Human Resource Officer Study*. Portsmouth: IBM United Kingdom Limited [Online]. Available at: www.ibm.com/workingbeyondborders (Accessed: 24 November 2011).

Jaffe, J. & Boggs, R. (2011) *Small and Meddium-sized business special market update*. International Data Corporation [Online]. Available at: http://www.idc.com/getdoc.jsp?containerId=230792 (Accessed: 24. November 2011).

Kankanhalli, A., Tan, B. C. Y. & Wei, K.-K. (2007) 'Conflict and performance in global virtual teams', *Journal of management information systems,* 23 (3), pp. 237-274.

Kirkman, B. L., Rosen, B., Tesluk, P. E. & Gibson, C. B. (2003) 'The impact of team empowerment on virtual team performance: the moderating role of face-to-face interaction', *Academy o fManagement Journal,* 47 (2), pp. 175-192.

Lee-Kelley, L. & Sankey, T. (2008) 'Global virtual teams for value creation and project success: A case study', *International Journal of Project Management,* 26 (1), pp. 51-62.

Levi, D. S. (2011) *Group Dynamics for Teams*. 3rd edn. London: SAGE.

Meister, J. C. & Willyerd, K. (2010a) *The 2020 Workplace: How Innovative Companies Attract, Develop, and Keep Tomorrow's Employees Today*. London: HarperCollins.

Meister, J. C. & Willyerd, K. (2010b) 'Mentoring Millennials', *Harvard Business Review,* (May), pp. 68-72.

Pedró, F. (2006) *THE NEW MILLENNIUM LEARNERS: Challenging our Views on ICT and Learning* OECD-CERI [Online]. Available at: www.oecd.org/dataoecd/1/1/38358359.pdf (Accessed: 12. December 2011).

Phemawat, P. (2011) *World 3.0: Global Prosperity and How to Achieve It*. Boston: Harvard Business Press.

Pink, D. H. (2011) *Drive. The surprising trugh about what motivates us*. NY: Riverhead Books.

Prensky, M. (2001) 'Digital Natives, Digital Immigrants Part 1', *On the Horizon,* 9 (5), pp. 1 - 6.

Rosen, B., Furst, S. & Blackburn, R. (2007) 'Overcoming Barriersto Knowledge Sharing in Virtual Teams', *Organizational Dynamics,* 36 (3), pp. 259-273.

Siebdrat, F., Hoegl, M. & Ernst, H. (2009) 'How to manage virtual teams', *MIT Sloan Management Review,* 5 (4), pp. 63-68.

Thiefoldt, D. & Scheef, D. (2004) 'Generation X and the Millennials: What you need to know about mentoring the new generation', *Law Practice Today,* (August 2004) [Online]. Available at: http://apps.americanbar.org/lpm/lpt/articles/mgt08044.html (Accessed: 12. December 2011).

Trunk, P. (2007) 'What Gen Y really wants', *Time*, 05 July.

[Type text]

Wainhouse Research LLC (2010a) *Brining Unified Communications to Life with Seamless Video Interoperablity.* [Online]. Available at: www.ivci.com (Accessed: 22. December 2011).

Wainhouse Research LLC (2010b) *Collaboration within the Telepresence Experience* Wainhouse Research [Online]. Available at: www.ivci.com (Accessed: 22. December 2011).

WorldatWork group (2011) *Telework 2011:A WorldatWork Special Report.* Scottsdale, AZ: WorldatWork [Online]. Available at: http://www.worldatwork.org/waw/adimLink?id=53034 (Accessed: 10. December 2011).

Zigurs, I. (2003) 'Leadership in virtual teams: oxymoron or opportunity?', *Organisational Dynamics,* 31 (4), pp. 339 - 351.

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