

# CMGT 582- Communication for International Development

Fall 2010, KER101; Wednesday 6:30pm

Martin Hilbert

Office hours: by appointment; mhillbert [at] usc.edu



Course description: This course builds on two main concepts:

**Development:** We are usually quick to note that we live in a global communication landscape, but we all too often do not pay enough attention to the fact that 82% of this world is living in conditions that are quite different from ours: the developing world. Half of the human population lives with less than US\$2.50 per day, making that a monthly income of less than US\$75 for every second member of our global information society. This does not only matter for those who are poor, but shapes the global communication landscape as a whole. We still start with reviewing the multiple dimensions of development. We will discuss questions like: What is development? Is poverty merely a matter of economic well-being? What are the driving forces behind development? What are the dynamics and interplay between developed and developing societies? What is the international community (like the United Nations, World Bank, global NGOs) doing about it? We will spend most of the time discussing the question: What is the role of communication as a building block for the development of a society?

**Digital innovation:** At the same time, the introduction of digital ICT (Information and Communication Technologies) changes the lives of all people around the globe (directly or indirectly). In less than two decades, 1 out of 3 people worldwide have linked up through the Internet, and 2 out of 3 have connected with mobile telephony. Our generation of social scholars has the luck (or responsibility) to live through and shape an era in which information and communication have become the driving force of human progress. ICT are the most powerful and also the most tangible tool to exploit the ensuing opportunities. We will start with reviewing the theories of innovation, technology and social change. We discuss questions like: What is the nature of technology and how does it evolve? What are the characteristics of the ongoing digital revolution? Where are ICT evolving from here? How do they already affect our lives and the lives of those living in poverty and what role can ICT play in development? What about differences and interdependencies between developed and developing nations? What are the limitations, threats and perils? What works and what are the costs?

Class structure: This is a seminar. Formal lectures will review the readings, but the focus is set on open class discussions based on the readings and projects generated by students. During the first 8 weeks we will review the theories and dynamics behind both of the underlying key concepts: development and digital innovation. During the remaining 7 weeks, students select and deepen their understanding of a specific topic that crosscuts both concepts. This might include, but is not limited to: e-education, e-literacy, e-health, e-business and management, e-government, capacity building, gender, future technologies, innovation systems, open source, freedom of speech, privacy, property rights, pilot and best practice projects, NGOs and global networking, United Nations and global governance, development aid, poverty reduction strategies, environmental and disaster management, public policy, agenda setting, digital culture, happiness and quality of life, among others.

Course requirements:

**In-class participation:** Students are expected to make informed contributions to class discussions and activities. This includes contributions to the class discussion based on the reading material. Grade percentage: 20%

**Class presentation:** Students will select one topic in which they give a presentation of the most relevant literature, key concepts, state-of-the-art and current challenges. Grade percentage: 30%

**Class project:** Students will develop a project on a chosen topic in which they are expected to make a contribution to the general understanding of the ongoing dynamics of ICT and development. This contribution may be based on primary data or secondary literature. Students will report weekly on the progress of their projects in the second part of the class. A final paper (15-25 pages) based on these results will be due during the week of finals. Grade percentage: 50%

Course material: All required class readings (books or articles) are online. The list of readings for each week is just a starting point. We may decide as a group to prioritize, add or delete material depending on where the class discussions take us.

A brief announcement from the Office of Civil Rights: Students requesting academic accommodations based on a disability are required to register with Disability Services and Programs (DSP) each semester. Please be sure a letter of verification for approved accommodations is delivered to me as early in the semester as possible.

The Annenberg School for Communication is committed to upholding the University's Academic Integrity code as detailed in the SCampus Guide. It is the policy of the School of Communication to report all violations of the code.

About the instructor: Before joining USC, Dr. Hilbert coordinated the Information Society Programme of United Nations Regional Commission for Latin America and the Caribbean for ten years (<http://www.cepal.org/SocInfo>). He has provided hands-on technical assistance in the field of ICT for development to Heads of States, government officials, legislators, diplomats, NGOs and civil society in 27 countries. In combination with this practical experience he has published peer-reviewed Journal articles in the fields of communication, development, public policy, political science, forecasting and social change. Dr. Hilbert has written five books about different aspects of ICT for development.

## Class schedule

Not all listed readings are mandatory. We will prioritize and distribute readings among students, according to interests.

1- Introduction to the class & to **ICT for Development**: a dynamic interplay between technology, society and policy

Martin Hilbert (2010), *"Towards a conceptual framework for ICT for Development"*, <http://blackboard.usc.edu/>

2- What is **development**? What does the **developing world** look like? Statistics, facts, faces of poverty, historical developments and aid.

Keywords (look up at: [www.wikipedia.org](http://www.wikipedia.org)): international development; Human Development Index; Happiness economics.

Videos: <http://www.gapminder.org>; [small world](#) (6min); [Millennium Development Goals](#) (4min); [Problems with GDP](#) (8min); [Economics of Happiness](#) (4min).

Amartya Sen (1999), *"Development as Freedom"*, <http://books.google.com> (Chapters 2 & 4; optional: Ch.1)

Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi (2010), *"The Measurement of Economic Performance and Social Progress Revisited"*, <http://www.stiglitz-sen-fitoussi.fr/documents/overview-eng.pdf> (Prolegomena)

3- What are the **origins** of and current **solutions** to underdevelopment and **poverty**?

Keywords (look up at: [www.wikipedia.org](http://www.wikipedia.org)): Washington Consensus; United Nations System; MDGs; Four Freedoms (European Union).

Videos: [The case for free trade Part I](#) (8min); [The case for free trade Part II](#) (8min); [The Myths of Free Trade and Free Markets](#) (19min); [Stiglitz on markets](#) (4min); [The Story of Stuff](#) (20min); [Fair Trade](#) (7min); [Chomsky on Globalization](#) (11min); [Sachs on ICT and MDGs](#) (3min); [Jeffrey Sachs interview](#) (10min); [The end of poverty? Think again](#) (3min).

- Noam Chomsky (1998), "A Century Later", <http://www.chomsky.info/articles/199809--.htm>
- Ha-Joon Chang (2003), "Kicking Away the Ladder: The 'Real' History of Free Trade"; [http://www.ilocarib.org.tt/trade/documents/economic\\_policies/SRtrade2003.pdf](http://www.ilocarib.org.tt/trade/documents/economic_policies/SRtrade2003.pdf)
- John Williamson (1990), "What Washington Means by Policy Reform", <http://www.iie.com/publications/papers/paper.cfm?researchid=486#1>
- Joseph Stiglitz (2002), "Globalism's Discontents", [http://www.prospect.org/cs/articles?article=globalisms\\_discontents](http://www.prospect.org/cs/articles?article=globalisms_discontents)
- United Nations (2010), "The Millennium Development Goals Report 2010", [http://un.org/millenniumgoals/pdf/MDG\\_A\\_Main.pdf](http://un.org/millenniumgoals/pdf/MDG_A_Main.pdf) (Press Release)
- Jeffrey Sachs (2005), "The End of Poverty", <http://www.ag.ohio-state.edu/~hcrd/people/staff/Sachs-End%20of%20Poverty.pdf>

#### 4- ICT for Development: overview and state-of-the-art

Keywords (look up at: [www.wikipedia.org](http://www.wikipedia.org)): ICT4D

Videos: [Effects of increased communication](#) (17min); [Social networking for development](#) (16min); [Where was Google all this time?](#) (7min); [Rural digital divide in Honduras](#) (3min).

Select one of the following reports:

- OECD (2010), "ICTs for Development: Improving Policy Coherence", <http://www.infodev.org/en/Article.478.html>
- ITU (2009), "Measuring the Information Society 2009", <http://www.itu.int/ITU-D/ict/publications/idi/2009>
- UNCTAD (2009), "The Information Economy Report 2009: Trends and Outlook in Turbulent Times", <http://www.unctad.org/ecommerce>
- UNDP (2001), "Making New Technologies Work for Human Development", <http://hdr.undp.org/en/reports/global/hdr2001>
- OECD (2008), "Information Technology Outlook 2008", <http://www.oecd.org/sti/ito>

Partnership for Measuring ICT for Development: <http://www.itu.int/ITU-D/ict/partnership>; World Bank: <http://www.worldbank.org/ict>; UN-GAID: <http://www.un-gaid.org>

⇒ Time to start thinking about your research topic!

#### 5- The nature of **technological change** and the theory of technological innovation: past trajectories and future visions of ICT.

Keywords (look up at: [www.wikipedia.org](http://www.wikipedia.org)): The Structure of Scientific Revolutions; Technological determinism; Engineering; Technological convergence; List of emerging technologies; nootropic.

Videos: [Exponential technological progress](#) (23min); [Dominant Design](#) (10min); [Brain computer interface](#) (2min); [wireless electricity](#) (10min).

- Brian Arthur (2009), "The Nature of Technology: What it is and how it evolves", <http://books.google.com>; Ch: 2 & 9

Devendra Sahal (1985), *“Technological guideposts and innovation avenues”*, Research Policy 14 (1985) 61-82, <http://www.usc.edu/libraries> => eJournals

Rosenkopf, L., & Tushman, M. L. (1994), *“The coevolution of technology and organization”*; Ch.19 in Baum, J. & Singh, J. (Eds.) (1994). Evolutionary dynamics of organizations.

James Utterback (1994), “Mastering the dynamics of innovation”, <http://books.google.com> ; Ch.2 Dominant designs.

Select one of the following papers:

Mikhail Lebedev and Miguel Nicolelis (2006), *“Brain-machine interfaces: past, present and future”*, Trends in Neurosciences 29: 536-546, <http://www.usc.edu/libraries> => eJournals

Greely, et al (2008), *“Towards responsible use of cognitive-enhancing drugs by the healthy”*, Nature 456, 702-705 (11 December 2008); <http://www.usc.edu/libraries> => eJournals

Lee Feigenbaum, et. al. (2007), *“The semantic Web in action”*, Scientific American, vol. 297, pp. 90-97, <http://thefigtrees.net/lee/sw/sciam/semantic-web-in-action>

## 6- Innovation theory and social evolution: long waves of human progress

Keywords (look up at: [www.wikipedia.org](http://www.wikipedia.org)): innovation; evolutionary economics; general-purpose technology; Kondratiev waves; creative destruction; technological innovation system.

Videos: [Greenspan on Schumpeter](#) (2min); [Carlota Perez on golden age](#) (4min).

Joseph Schumpeter (1939), *“Business Cycles: A Theoretical, Historical, And Statistical Analysis of the Capitalist Process”*, Chapter IV: The Contours of Economic Evolution, [http://classiques.uqac.ca/classiques/Schumpeter\\_joseph/business\\_cycles/schumpeter\\_business\\_cycles.pdf](http://classiques.uqac.ca/classiques/Schumpeter_joseph/business_cycles/schumpeter_business_cycles.pdf)

Carlota Perez (1983), *“Structural change and assimilation of new technologies in the economic and social systems”*, <http://www.carlotaperez.org/papers/basic-structuralchange.htm>

Carlota Perez (2004), *“Technological revolutions, paradigm shifts and socio-institutional change”*, <http://www.carlotaperez.org/papers/basic-technologicalrevolutionsparadigm.htm>

## 7- Digital Particularities and Information Societies: creative destruction through digital means

Keywords (look up at: [www.wikipedia.org](http://www.wikipedia.org)): e-business, e-government, e-democracy.

Videos: [Claude Shannon: Father of the Information Age](#) (29min); [Manuel Castells on ICT as material culture](#) (80min).

Manuel Castells (2000), *“The Rise of the Network Society”*, <http://books.google.com> ; Ch. 1.

Manuel Castells (2009), *“Communication Power”*, <http://books.google.com> ; pages: 19-42.

Carl Shapiro and Hal Varian (1999), *“Information rules: a strategic guide to the network economy”*, <http://books.google.com> ; Ch. 1 & 7.

Yochai Benkler (2006), *“The Wealth of Networks How Social Production Transforms Markets and Freedom”*, [http://cyber.law.harvard.edu/wealth\\_of\\_networks/Download\\_PDFs\\_of\\_the\\_book](http://cyber.law.harvard.edu/wealth_of_networks/Download_PDFs_of_the_book) ; Ch. 1.

⇒ Decision regarding your research topic!

## 8- The **digital divide**: origins, reality and outlook of a challenge far beyond access

**Keywords** (look up at: [www.wikipedia.org](http://www.wikipedia.org)): digital divide; Diffusion of Innovations; Telecentre, social network; [example of social networks](#).

**Videos**: [Digital divide in U.S.](#) (2min); [Brainstorming on solutions](#) (2min); [Mobiles divide and Google](#) (60min); [Social Networks](#) (18 min).

Tom Valente (2010), “*Diffusion of Innovations: Network Analysis*”, [VideoPart1](#) (10min); [VideoPart2](#) (9min); [VideoPart3](#) (10min).

Everett Rogers (1962/2003), “*Diffusion of Innovations*”, <http://books.google.com> ; pages: 168-202.

Martin Hilbert (2010), “*The manifold definitions of the digital divide and their diverse implications for policy responsibility*”, <http://www.tprcweb.com/images/stories/2010%20papers/Hilbert%20manifold%20Digital%20Divide.pdf>

Navas-Sabater, Juan, Dymond, Andrew and Juntunen, Niina. (2002), “*Telecommunications and information services for the poor*”, World Bank Discussion Paper [No. 432](#); <http://www.worldbank.org/reference> => Documents&Reports ; pages: 1-40.

Martin Hilbert (2010), “*When is cheap, cheap enough to bridge the digital divide? Modeling Income Related Structural Challenges of Technology Diffusion in Latin America*”, World Development, Vol.38, issue 5, 756-770; <http://www.usc.edu/libraries> => eJournals.

## 9- **Public and private policies and strategies** for digital development: leapfrogging into the digital age

**Keywords**: (look up at: [www.wikipedia.org](http://www.wikipedia.org)): aid; forecasting; Delphi method; [agenda setting](#) and [policy processes](#); [eEurope2002/2005/i2010](#).

Wilson Peres and Martin Hilbert (2009), “*The Information Society in Latin America and the Caribbean: Development of Technologies and Technologies for Development*”, Ch. XII; United Nations ECLAC, <http://www.cepal.org/SocInfo>

Rafael Popper and Ian Miles (2004), “*Overview of selected European IST scenario reports*”, [http://fistera.jrc.ec.europa.eu/docs/Scenario\\_Pool\\_version\\_1.7.pdf](http://fistera.jrc.ec.europa.eu/docs/Scenario_Pool_version_1.7.pdf)

Michael Minges (2005), “*Evaluation of e-Readiness Indices in Latin America and the Caribbean*”, United Nations ECLAC, <http://www.cepal.org/SocInfo/publicaciones>

Martin Hilbert, Ian Miles and Julia Othmer (2009), “*Foresight tools for participative policy-making in inter-governmental processes in developing countries: Lessons learned from the eLAC Policy Priorities Delphi*”, Technological Forecasting & Social Change, 76, 2, 880-896; <http://www.usc.edu/libraries> => eJournals.

***The content of the following 6 weeks will depend on the research interests of students. Students are invited to propose new topics. Here are some topics that might be selected:***

## - Poverty Reduction by digital means

Robert Jensen (2007), "The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector", Quarterly Journal of Economics, 122, 3; <http://www.mitpressjournals.org/doi/pdfplus/10.1162/qjec.122.3.879>

Randy Spence (2003), "Information and Communications Technologies (ICTs) for Poverty Reduction: When, Where and How?", IDRC; [http://network.idrc.ca/uploads/user-S/10618469203RS ICT-Pov\\_18\\_July.pdf](http://network.idrc.ca/uploads/user-S/10618469203RS ICT-Pov_18_July.pdf)

Catherine Adeya (2002), "ICTs and Poverty: A literature review", IDRC; <http://web.idrc.ca/uploads/user-S/10541291550ICTPovertyBiblio.doc>

Don Slater and Jo Tacchi (2004), "ICT innovations for poverty reduction", UNESCO, <http://unesdoc.unesco.org/images/0013/001361/136121e.pdf>

## - Women and ICT

Information Technology and International Development Journal (2007), "Special issue and women's empowerment and the information society", <http://itidjournal.org/itid/issue/view/15>

Richard Heeks, Arun Shoba and Sharon Morgan (2004), "Researching ICT-based enterprise for women in developing countries: a gender perspective", <http://www.womenictenterprise.org>

Cecilia Ng and Swasti Mitter (2005), "Gender and the Digital Economy: Perspectives from the Developing World", <http://books.google.com>

Eszter Hargittai and Steven Shafer (2006), "Differences in Actual and Perceived Online Skills: The Role of Gender", Social Science Quarterly 87:2, 432-448; <http://www.usc.edu/libraries>

## - e-Democracy, transparency and participation

**Keywords:** Nineteen Eighty-Four; eRulemaking; e-democracy; e-voting; Freedom of information legislation. **Videos:** [e-dictatorship](#).

Freedominfo (2009), "Freedom of information around the world", <http://www.freedominfo.org/>

Manuel Castells, et.al. (2007), "Mobile Communication and Society: Ch. 7: The Mobile Civil Society: Social Movements, Political Power, and Communication".

Stephen Coleman (2005), "The lonely citizen: Indirect representation in an age of networks", Political Communication, 22, 197-214. <http://www.usc.edu/libraries> => eJournals

Martin Hilbert (2009), "The Maturing Concept of e-democracy: From e-Voting and Online Consultations, to Democratic Value Out of Jumbled Online Chatter", Journal of Information Technology and Politics; 6, 2; 87-110; <http://www.usc.edu/libraries> => eJournals

## - e-Education

Human Technology: An Interdisciplinary Journal on Humans in ICT Environments (2005), "Special issue on ICT and education"; <http://www.humantechnology.jyu.fi/archives/october05.html>

BECTA (2006), "The BECTA Review 2006: Evidence on the progress of ICT in education", <http://publications.becta.org.uk/display.cfm?resID=25948>

OECD (2007), "Giving Knowledge for Free: The Emergence of Open Educational Resources", <http://www.oecd.org/dataoecd/35/7/38654317.pdf>

## - e-Health

Keywords: [Healthcare IT News](#), [iHealthBeat](#).

WHO (2006), "eHealth tools and services: needs of the member states", [http://www.who.int/kms/initiatives/tools\\_and\\_services\\_final.pdf](http://www.who.int/kms/initiatives/tools_and_services_final.pdf)

Karl Stroetmann, et. al. (2006), "eHealth is Worth it: The economic benefits of implemented eHealth solutions at ten European sites", [http://www.ehealth-impact.org/download/index\\_en.htm](http://www.ehealth-impact.org/download/index_en.htm)

Empirica (2009), "Benchmarking ICT use among General Practitioners in Europe"; <http://www.ehealth-indicators.eu/>

## - Intellectual Property Rights

UK Commission on Intellectual Property Rights (2002), "Integrating intellectual property rights and development policy"; Ch 1 and 5. [http://www.iprcommission.org/papers/pdfs/final\\_report/CIPRfullfinal.pdf](http://www.iprcommission.org/papers/pdfs/final_report/CIPRfullfinal.pdf)

Ruth Okediji (2004), "Development in the Information Age Issues in the Regulation of Intellectual Property Rights, Computer Software and Electronic Commerce", UNCTAD, [http://www.iprsonline.org/unctadictsd/docs/CS\\_Okediji.pdf](http://www.iprsonline.org/unctadictsd/docs/CS_Okediji.pdf)

Rod Falvey, Neil Foster, and David Greenaway (2004), "Intellectual Property Rights and Economic Growth", [http://www.gep.org.uk/leverhulme/publications/Papers/2004/2004\\_12.php](http://www.gep.org.uk/leverhulme/publications/Papers/2004/2004_12.php)

## - Economic Growth and digital productivity

Keywords: Productivity paradox. Videos: [ICT, productivity and growth](#);

Erik Brynjolfsson and Adam Saunders (2009), "Wired for Innovation: How Information Technology is Reshaping the Economy", <http://books.google.com>

UN ECLAC (2010), "Innovation and Economic Development: The Impact of Information and Communications Technologies in Latin America"; Edward Elgar.

Edward Steinmueller (2001), "ICTs and the possibilities for leapfrogging by developing countries", International Labour Review 140(2): 193-210.

Paul David (1990), "The Dynamo and the Computer: A Historical Perspective on the Modern Productivity Paradox", American Economic Review, 1990, 355-61: <http://www.usc.edu/libraries>  
=> eJournals

## - e-Business and e-commerce

Paulo Tigre (2003), "E-Commerce Readiness and Diffusion: The Case of Brazil", <http://crito.uci.edu/papers/2003/brazil.pdf>

United Nations ECLAC (2007), "Foreign Investment in Latin America and the Caribbean 2007. ICT: transnational corporations and business strategies", [Ch 2 & 3. http://www.cepal.org/publicaciones/xml/1/32931/lcg2360i\\_f2.pdf](http://www.cepal.org/publicaciones/xml/1/32931/lcg2360i_f2.pdf)

UNCTAD (2008), "Information Economy Report 2007-2008: Science and technology for development: the new paradigm of ICT", Ch 4 & 5; [http://r0.unctad.org/ecommerce/ier07\\_en.htm](http://r0.unctad.org/ecommerce/ier07_en.htm)

## - e-Government

United Nations (2008), "UN e-Government Survey 2008: From E-Government to Connected Governance", [http://www.unpan.org/egovkb/global\\_reports/08report.htm](http://www.unpan.org/egovkb/global_reports/08report.htm) (see also reports 2003, 2004, 2005)

Darrell West (2007), "Global e-government 2007", Brown University, <http://www.insidepolitics.org/policyreports.html> (see also reports 2000-2006)

Richard Heeks (2006), "eGovernment: Improving the National and International Measurement, Evaluation and Comparison of eGovernment", <http://www.sed.manchester.ac.uk/idpm/research/publications/wp/igovernment/index.htm> (see also other papers)

United Nations ECLAC (2007), "White Book of e-Government Interoperability for Latin America and the Caribbean", <http://www.cepal.org/ddpe/publicaciones/xml/7/28647/W129.pdf>

## - Low-cost access

Videos: [Impact of mobile phones in Africa](#); [One laptop per child](#).

Georg Caspary and David O'Connor (2003), "Providing low-cost information technology access to rural communities in developing countries: What works? What pays?" OECD, <http://www.oecd.org/dataoecd/13/52/7112502.pdf>

Francisco Proenza, Roberto Bastidas-Buch and Guillermo Montero (2001), "Telecenters for Socioeconomic and Rural Development in Latin America and the Caribbean"; <http://www.iadb.org/sds/itdev/telecenters/fullrep.pdf>

Michael Best (2003), "The wireless revolution and universal access". In Trends in Telecommunications Reform. ITU; [http://mikeb.inta.gatech.edu/uploads/papers/TTR03\\_Chapter\\_7.pdf](http://mikeb.inta.gatech.edu/uploads/papers/TTR03_Chapter_7.pdf)

The Economist (2008), "The laptop wars: Will charity or profit end the digital divide?", <http://www.nextbillion.net/news/the-laptop-wars>

## - Environment and digital disaster management

Keywords: Sustainable development.

European Presidency Sweden (2009), "A Green Knowledge Society - An ICT policy agenda to 2015 for Europe's future knowledge society"; [http://ec.europa.eu/information\\_society/eeurope/i2010/greenknowledgesociety.pdf](http://ec.europa.eu/information_society/eeurope/i2010/greenknowledgesociety.pdf)

Ann Majchrzak, Sirkka Jarvenpaa and Andrea Hollingshead (2007), "Coordinating Expertise Among Emergent Groups Responding to Disasters"; Organization Science, 18: 1, 147-161; <http://www.usc.edu/libraries> => eJournals

Timothy Sellnow, Matthew Seeger and Robert Ulmer (2002), "Chaos theory, informational needs, and natural disasters", Journal of Applied Communication Research, 30: 4, 269-292; <http://www.usc.edu/libraries> => eJournals

Kathrin Stolzenburg (2007), "Regional Perspectives on Digital Disaster Management in Latin America and the Caribbean", UN, <http://www.cepal.org/publicaciones/xml/9/28529/W128.pdf>