Technology in the Economic Development Office

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2003 Revision of “How To Automate the Economic Development Office”

Southern Economic Development Council
Introduction

The availability and widespread use of office automation tools has rapidly transformed many clerical functions. Earlier editions of this publication asked whether it was cost and time effective to automate the office. Today, given both the sharply lower costs and the increasingly widespread use of automated data and communication, the question is not whether, but how to best implement office technology.

Most development prospects assume that any competent organization will adequately utilize electronic means of data storage, transmission and communication. Demand and expectations are quite different than they were as late as 1990. Indeed, it seems incredible that widespread Internet access has been available for less than a decade in most regions. Economic development practices and procedures are quickly changing as a result. This booklet provides a general overview of current cost-effective best practices to improve the efficiency of the economic development organization.
Technology in the ED office

Use of Technology Membership Survey

The survey was sent out via email to 979 SEDC members on August 7, 2003. 178 persons responded as of September 4, 2003 for a response rate of 18%. The response rate was about average for the majority of membership surveys and was administered via the zoomerang.com website.

- A large majority (70% or more) of the respondents indicated that they or their organization utilize the following devices: desktop and laptop computers, cell phone (with no web mail attachments), web page, digital camera, scanner and fax.
- Approximately half of the respondents reported using PDAs (personal digital assistants).
- Use of digital and analog copiers was about equal (50-45%).
- Fewer than 25% use cell phones with web mail or video cameras. Additionally, many reported use of color copiers, color printers, and electronic slide projectors.
- The majority of computers (76%) are 2-3 years old, and use Microsoft Office Suite programs (91%).
- 86% of respondents said that the technology was “usually easy” or “neither easy nor difficult” to learn or use. The overwhelming majority (98%) indicated that they are satisfied with their current use of office technology.
- Regarding software, more than 90% use word processing, databases, spreadsheets, email, PDF files, and antivirus programs.
- Over 70% use desktop publishing, slide shows, and accounting programs.
- Approximately half use GIS/mapping programs and general CD-ROMs for reference.
• A few respondents indicated use of graphic design/autoCAD software. Two persons mentioned that their organization created its own software for tracking ED projects.

• Microsoft Office programs (Word, Access, and Excel) are the most common programs for building/site inventory. State databases in Alabama, Tennessee, South Carolina, Arkansas, and Missouri were frequently mentioned. Several organizations indicated use of self-made databases.

• 66% of organizations with their own webpages outsource their design and maintenance. Similarly, 75% outsource graphic design projects.

• About half (56%) have allocated funds specifically for technology purchases in their budget. Of these, 76% spend more than $2000 annually.

• Outlook, ACT!, and Goldmine, respectively are the most popularly used contact management programs

• 57% serve smaller communities ranging from 15,001-175,000.

• Budget size varies widely, but 53% have budgets ranging from $100,000-$500,000. 25% indicated budgets of over $1,000,000.

• 74% have a staff or 7 or fewer.
Software and supplies especially relevant to ED

Only about a third of respondents (32%) reported use of programs specific to economic development. LOCI and GIS were most often mentioned as specific economic development programs.

Potential of GIS

One respondent claimed that, “GIS is the most useful and powerful tool we use in economic development. There are not enough organizations using this tool correctly or to its highest potential.”

A GIS (Geographic Information System) is a computer program and/or system that tracks, stores, analyzes and displays geographic/spatial information. GIS users also include the operation, personnel, and data that go into the system as part of the definition.

Effective economic development strategies often require geographic information. Examples include:

- Determining the spatial patterns of households and businesses in a community.
- Determining the best sites to build an industrial park.
- Performing a retail analysis based on location.
- Determining income concentrations
- Finding the best regions to target specific industries

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1 Aforementioned survey.
GIS allow ED practitioners to combine business and resident data to design such strategies. A GIS is a database program that runs on personal and networked computers. Its main function is to link the spatial data with information associated with the area or object, such as by combining population, median income and the employment base of a county or city.

To learn more about GIS technology and methods, contact the geography department of your local university, the GIS site at www.gis.com, the local county planning department, your state’s department of natural resources, or a USGS Earth Science Information Center (ESIC). To locate the nearest ESIC, call 1-888-ASK-USGS, visit ASK-USGS web site, or visit www.usgs.gov.  

Major Economic Development Analysis Programs

IMPLAN

The Minnesota Implan Group (MIG, Inc.) in Minneapolis developed IMPLAN as an input/output (I/O) modeling system. This means that it takes any new funds coming into a local economy from revenue, investment, or income as an input and then uses an employment multiplier to generate an outcome in terms of new jobs created. For example, a company may generate 10 new jobs for every 100 jobs it brings into a community as a result of employee spending.

While IMPLAN is useful for employment and income predictions, it does not calculate a fiscal analysis of government costs or fiscal impact. IMPLAN is also a “static

3 Ibid, USGS.
model” program that does not consider the changes over time in a dynamic economy from elevated wages or other external factors. As a result, some of the information generated may be of limited value.

REMI

Regional Economic Models, Inc. in Amherst, Massachusetts designed REMI as an economic stimulation model. This type of model considers time, changes in prices, and demographic change. REMI allows for varied input of employment, prices income and revenue and compares it against the current situation. REMI is therefore particularly well suited to figuring out problems like the impact of a tax increase. Like IMPLAN, REMI uses data tailored to a specific industry and community, but does not analyze the impact of very large industries with as much detail. Earlier models of REMI tended to be prohibitively expensive at the county level, although newer models are expected to be more affordable. For this reason, REMI is generally used more at the state and regional levels.4

LOCI

Economists at the Georgia Institute of Technology developed LOCI (Local Impact Model) to provide a fiscal and economic analysis of government incentive packages.5 It differs from traditional models in that it attempts to gauge both the benefits earned from new development in terms of new tax revenue against the costs of more services demanded as a result of increased economic activity.6 It performs the fiscal

6 http://www.ceds.gatech.edu/loci/1.html August 11, 1999
impact analysis the IMPLAN and REMI do not. It also operates on city level, whereas
IMPLAN and REMI stop at the county level.

One of the biggest drawbacks to LOCI is that while it can perform an input/output
analysis, it takes a much greater amount of data to do so than the other programs. If a
state or large region incorporates a group membership to the database, this disadvantage
diminishes. Also, LOCI analyses for evaluating business impacts tend to have positive
results, so it may be a more useful tool for negotiation rather than determining a simple
answer to the question, “Will this action help our community financially?”7 ED
organizations and local governments would do well to allocate a portion of their budgets
to a mixture of input/output and fiscal analysis to get the most complete picture possible.

Recommended Technologies for the ED Office

The Economic Development Institute at the Georgia Institute of Technology
conducted a study in May 2003 of ED technology use in several Georgia counties.
They recommend that economic developers have or do the following:

- Spend at least 3% of the total annual budget on information technology
- Have one computer per full-time employee, not more than 3 years old.
- Notebook computers should be used for any off-site work.
- Broadband Internet access with firewall for the organization
- Use an office productivity suite, including word processing, spreadsheet,
presentation, and email for every computer
- One digital camera and image scanner with image-editing software per
  organization
- A basic database management software package for the organization
- A diagramming or drawing software package
- A small firm accounting software package
- A basic web development software package
- A video/data projector, shared by up to 3 sister organizations
- A GIS software package
- One handheld global positioning system (GPS) device per organization

7 Meek, 2.
• A high-speed black and white laser printer
• A color printer
• A fax (the printers and fax can be combined into one device)
• Sharing of a larger format color printer by up to six sister organizations
• An interactive website
• All programs should be current and licensed

The Effective ED Website

The International Economic Development Council (IEDC) claims that the site selection process has sped up rapidly in the last few years, going from an average of six months to as little as 60 days. It has devised data standards to better meet client needs. The following should be present on websites:

• Major Employers
• Newest Companies in the Area
• Average Occupational Salary
• Worker's Compensation Rates
• Unemployment Insurance Rates
• Percent of workforce unionized
• Real and personal property tax rates
• Average sales cost for sites
• Utilities cost and availability
• Quality of life data, including material on the central city and selected suburban school districts

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8 "The Local Economic Development Organization Technology Update (LEDO Tech-up) Study," Greg Lauderman, Georgia Tech Economic Development Institute, May 2003. techsmart.edi.gatech.edu

Site selection decisions, especially at the preliminary level, are increasingly being made solely from the quality of the organizational website. Every ED organization needs to have a top-notch site, professional in appearance, informative according to IEDC guidelines, and aesthetically pleasing. The website is the “first impression” for most prospects and will only be more important in the future.
Summary: Needs and Current Challenges for the ED office

Computer technology is constantly evolving. To be truly effective, the economic development organization must evolve concurrently. ED professionals must spend limited budgets effectively in order to further their ultimate mission— to increase the overall level of wealth and quality of life in their given region. Therefore, technology expenditures must “pay their way.”

Equipment and skills should be upgraded every few years in order to remain competitive. Not everyone in the organization needs to be a “techie,” but everyone should be comfortable enough to perform basic functions with the programs and devices listed above. Failure to do so may have not been as crucial in the past, but the perception of being technologically out of date will easily eliminate a community from the business attraction process.

Finally, all major stakeholders in the community including board members and volunteers should be educated as to the need for spending on training and equipment, even in slow economic times. Communities that maintain a progressive attitude toward technological change are generally in a better position to take advantage of any potential new business expansions that may strengthen and diversify their overall employment base.
Appendix A:
Useful websites for economic developers

Note: website addresses change frequently; check a search engine if the webpage listed is no longer in service.

Agriculture

- AgnicHome Page: agnic.org
- AgriculturalResearch Service: ars.usda.gov

Associations

- International Economic Development Council: iedconline.org
- American Chamber of Commerce Researchers Association: accra.org
- Economic Development Institute: occe.ou.edu/edi
- International Chamber of Commerce and City-State-Provence Directory: chamber-of-commerce.com
- National Association for Business Economics: nabe.com
- National Association of Development Directors: nado.org
- National association of regional councils: narc.org
- State Services Organization: sso.org
- Southern Economic Development Council: sedc.org
- Southern Growth Polices Board: southern.org
- Northeastern Economic Developers Association: nedaonline.org
- National Rural Economic Developers Association: nreda.org
- National Business Incubation Association: nbia.org
- National Association of Management and Technical Information Centers: namtac.org

Banking & Finance

- Cardfacts: Credit card information and interest rates: cardfacts.com
- FDICSitemap, - Information Category View: www2.fdic.gov/WebCat/SiteMap.asp#2
- Federal Financial Institutions Examination Council Home Page: ffiec.gov/
- FFIECComm Reinv Act Aggregate Reports: ffiec.gov/webbraad/craaggr.htm
- Mortgage Statistics From National Mortgage News: mortgagestats.com
- NICBanking Web Page: ffiec.gov/NIC/default.htm
- The Federal Reserve Board: bog.frb.fed.us/

Business News & Research

- American Business Information - Sales Leads & Mailing Lists: abii.com
- Biotechnology Industry Information, News, Links And Resources: biotech.about.com/?once=true&
- Bloomberg Online _ Website: bloomberg.com/welcome.html
- Business2.0 Home: business2.com
- Business Week Online: businessweek.com
- Reed Business Information: cahners.com
- Cnnfn: money.cnn.com
- CompaniesonlineSearch: tripod.lycos.com/smallbiz/index.html
- Competitive Intelligence - Get Smart!: fastcompany.com/online/14/intelligence.html
- Corptech Research Areas: corptech.com/corptech/aboutct.php
- Dun& Bradstreet Home Page: dnb.com/us
- Edgar Online: edgar-online.com
- Corporate Information: corporateinformation.com
- FastCompany: fastcompany.com/homepage
- First Worldwide Internet Pages - Worldwide Business List: firstworldwide.com
- Forbes Lists: forbes.com/lists/
- Galenet Home Page: galenet.gale.com/a/acp/db/bgmi/
- Hoover’s Online: hoovers.com/free
- Inc. Magazine: inc.com/magazine/20030801/index.html
- Intellifact.ComBusiness Information Central: intellifact.com
- Knight-Ridder: http://www.kri.com/
- Library Of Congress: lcweb.loc.gov/homepage/lchp.html
- Money Online: money.cnn.com
- MutualFunds Home Page -- Funds 101: brill.com/newbie.html
- Namonline: nam.org
- Search Commerce Inc: search.commerceinc.com
- Selector Online: selectoryonline.com
- Semi’s Home Page: semi.org
- Smart Money: smartmoney.com
- Society Of Automotive Engineers: sae.org/servlets/index
- Society Of Manufacturing Engineers: sme.org/cgi-bin/getsmepage.pl?/new-sme.html&&&SME&
- Techsavv.com: military suppliers
- Telepolis-NewIssue: heise.de/tp/english/default.html
- Thebes Of AMERICA: bestofamerica.com/BOA/index.html
- Thomas Register Of American Manufacturers: thomasregister.com
- Upsidetoday: upside.com
- Venture Capital: vcapital.com
- Wall Street Research Net's Home Page: hwsrn.com
- Wired Magazine: wired.com/wired/current.html

Cities & Regions

- American Community Network: can.net
- Basic Tables Profile Generator with Menus:
  oseda.missouri.edu/mscdc/profiles/xtabs3.mainmenu.html
- Clickcity: clickcity.com
- DestinationSouthlink: destinationsouthlink.com
- HometownUSA: hometownusa.com
- National Congress For Community Econ Dev: nced.org
- Official City Sites, Official City Web Sites, Official City Home Pages:
  officialcitysites.org
- Selectown: selectown.com
- USAResource Guide-Key To The City: pe.net/~rksnow/

Community Development and Planning

- American Planning Association: planning.org
- Community Assistance Team: ncl.org
- Community and Rural Development Institute: cals.cornell.edu
- Local Initiative Support Corporation: liscnet.org
- National Civic League: ncl.org
- National Community Development Association: ncdonline.org
- The Planners Network: plannersnetwork.org
- Planning Commissioners Journal “Planners Web”: plannersweb.com
- West Florida Regional Planning Council Economic Development District’s

Criminal Justice

- Apbnews.ComCrime, Justice, Safety: apbnews.com
- Bureau of Justice Statistics Home Page: ojp.usdoj.gov/bjs/
- Bureau Of Prisons Home Page: bop.gov
- Crime Data Sources In Criminal Justice: faculty.ncwc.edu/toconnor/data.htm
NCJRS Criminal Justice Statistics Link: ncrjs.org/statwww.html

Direct Business Assistance

- Business Funding Directory: businessfinance.com
- Business Resource Center: morebusiness.com
- Business Round Table: brtable.org
- Business for Social Responsibility: bsr.org
- National Business Incubation Association: nbia.org
- SCORE, Service Corps of Retired Executives: score.org

Downtown Revitalization

- The American Institute of Architects: aiaonline.org
- American Public Works Association: pubworks.org
- Building Officials and Code Administrators International: bocai.org
- International Downtown Association: ida-downtown.org
- National Trust for Historic Preservation’s Main Street Association: mainst.org

Econ & Demographic Stats

- American Demographics: demographics.com/
- Census Bureau - American Factfinder: factfinder.census.gov/servlet/BasicFactsServlet
- BEA Survey Of Current Business: bea.doc.gov/bea/pubs.htm
- Bureau Of Economic Analysis Home Page: bea.doc.gov/
- Calculating REGIONAL INPUT-OUTPUT MULTIPLIERS: rri.wvu.edu/WebBook/Schaffer/chap05.html#Heading2
- Census Bureau - County Business Patterns: census.gov/epcd/cbp/view/cbpview.html
- Census Bureau - Index-Subjects A To Z: census.gov/acsd/www/sub_all.htm
- Demographics: icsc.org/srch/rsrch/demographics/index.html
- Department Of Commerce: doc.gov
- EconData.Net
- Economic Development Directory: ecodevdirectory.com
- Economic Development Network: economicdevelopment.net
- Economagic_Economic Time Series Page: economagic.com
- Economic Rankings -- Policom: policom.com
- Economic Statistics Briefing Room_ Production: whitehouse.gov/fsbr/production.html
- Galileo Economic Data: usg.edu/galileo/internet/business/econdata.html
- Growth Strategies Organization, Inc.: economicstrategies.com
- Population Data And Resources: faculty.washington.edu/~krumme/350/population.html#pop
- Population Estimates-Census Bureau: eire.census.gov/popest/estimates.php
- Regional Impact Models: rri.wvu.edu/WebBook/Schaffer/TOC.html
- Regional Input-Output Multipliers Rims li: bea.doc.gov/bea/regional/rims/
- Reis- Regional Economic Information System: govinfo.kerr.orst.edu/
- Stat-Usa_Internet Site Economic, Trade, Business Information: stat-usa.gov/stat-usa.html
- The State New Economy Index: neweconomyindex.org/states/2002/
- WebEc- WWW Resources In Economics: helsinki.fi/WebEc/WebEc.html

ED Industry Pubs

- Area Development Magazine Online: area-development.com
- Business Xpansion Journal: globalcommunitynetwork.com/bxj/
- Center For The New West: newwest.org
- Connected- Home Page: connected.org
- Expansion Management Online: expansionmanagement.com
- Plants Sites & Parks - Bizsites: bizsites.com/index.html
- Sitenet- Corporate Real Estate & ED Info: conway.com
- Southern Business & Development: s-bd.com
- TVA’s Economic Edge: tva.gov/econdev/index.htm

Economic Development- General

- Business Retention, Expansion And Economic Development: brt-inc.org
- Dr Richard Florida-Heinz Professor Of Regional Economic Development: heinz.cmu.edu/~florida
- Economic Development Ideas That Work
- Economic Development Online: edo.umn.edu
- Economic Development Services, Inc.: economicdevelopment.net/main.htm
- EhowIndex: ehow.com/home/home.jsp
- Empowerment Zones And Enterprise Communities-Federal: ezec.gov
- Esri- The GIS Software Leader, Because Geography Matters: esri.com
- Geographic Information Services, Inc.: gis-services.com
- Innsite(Sm) The Internet Directory Of B&Bs: innsite.com
- Internet Economic Development Resources: lib.lsu.edu/bus/econdev.html
- Profinet'sExpert Database: http://www2.profnet.com
- Resources for Economists on the Internet: http://rfe.wustl.edu
- Rural Development Online: rurdev.usda.gov
- Site Selection Checklist: conway.com/cheklist
- StatUSA Internet: stat-usa.gov
- The Brandow Company: brandow.com
- The Right Site - Demographics: easidemographics.com
- WebEc- Economic Development, Technological Change And Growth: helsinki.fi/WebEc/webeco.html
- Whittaker Associates, Inc. Company Profile: whittakerassociates.com
ED Research

- Aspen Institute: aspeninst.org
- Center for Entrepreneurial Leadership – Clearing House on Entrepreneurial Education: celcee.edu
- Committee for Economic Development: ced.org
- Community Based Collaborative Research Consortium: cbcrc.org
- Economic Development Research Group: edrgroup.com
- Good Jobs First: goodjobsfirst.org
- International Institute for Sustainable Development: iisd.org
- Northeast-Midwest Institute: nemw.org
- PICCED, Pratt Institute Center for Community and Environmental Development: picced.org

Education

- Infoseek: Colleges and Universities: infoseek.go.com
- Ask ERIC: askeric.org/Eric/
- Education Policy Institute: educationpolicy.org
- Higher Education Research Institute: gseis.ucla.edu/heri/heri.html
- HEPROC Home Page: heproc.org
- College Board: collegeboard.com
- US News College Rankings:
  usnews.com/usnews/edu/college/rankings/rankindex_brief.php
- Wall Street Journal Career Page: careerjournal.com
- Collegenet Home Page: collegenet.com
- Education Index: educationindex.com
- Education Policy Program in Center For Education and Human Services (SRI Int’l): sri.com/policy/cehs/edpolicy/
- Education, Research, and Policy Archives: aera.net/gov/
- Encyclopedia Of Education Stats: nces.ed.gov/help/sitemap.asp
- Integrated Postsecondary Education Data System (IPEDS):
  nsf.gov/sbe/srs/sipeds/start.htm
- ISM's Internet Resource Page: ism.ws/OnlineGuides/WebResources.cfm
- The Nation's Report Card: nces.ed.gov/nationsreportcard
- National Center For Education Statistics (NCES): nces.ed.gov
- Office of Planning and Analysis/Auburn University: panda.auburn.edu
- Southern Regional Education Board: sreb.org
- Surveys IPEDS: nces.ed.gov/ipeds
- Center On Education Policy Publications & Newsletters:
  cteredpol.org/publications.htm

Energy

- EIA Department of Energy Home: eia.doe.gov/emeu/states/_states.html
- US Energy Information Administration: eia.doe.gov
- JEA: jea.com

**Environment**

- Environmental Protection Agency: epa.gov
- Epa Envirofacts Warehouse Homepage: epa.gov/enviro/index.html
- National Climatic Data Center (NCDC): ncdc.noaa.gov/
- NOAA-NESDIS- National Geophysical Data Center (NGDC): ngdc.noaa.gov/
- National Oceanic and Atmospheric Administration: eis.noaa.gov

**Federal Government**

- Appalachian Regional Commission: arc.gov
- Bureau of Labor Analysis: bea.doc.gov
- Census bureau: census.gov
- Corporation for National Service: americorps.org
- Digital Divide: ntia.doc.gov
- Economic Development Administration: eda.gov
- Empowerment Zone/Enterprise Community Online/
  Rural Empowerment Zone and Enterprise Community Program: ezec.gov
- Federal Bureau of Investigation: fbi.gov
- Federal Emergency Management Agency: fema.gov
- Federal Home Loan Banks System: fhlbanks.com
- Federal Reserve Office of Community Affairs:
  federalreserve.gov/community.htm
- Firstgov.gov- is the main portal to all U.S. Federal websites
- Library of Congress: loc.gov
- National Association of Homebuilders: nahb.org
- Patent and Trademark Office: uspto.gov
- President's Council on Sustainable Development: usda.gov/sustainable
- Securities and Exchange Commission's Information for Small Businesses
- Small Business Administration Online: sec.gov/info/smallbusiness.shtml
- U.S. Department of Agriculture: Rural Development: usda.gov
- U.S. Department of Agriculture: National Agricultural Library-Rural
  Information Center: nal.usda.gov/ric/index.html
- U.S. Department of Commerce: NTIA, NIST, Census: commerce.gov
- U.S. Department of Education: The Community Technology Centers
  Program: http://www.ed.gov/offices/OVAE/AdultEd/CTC/index.html
- U.S. Department of Energy: Center of Excellence for Sustainable
  Development: sustainable.doe.gov
- U.S. Department of Housing & Urban Development: hud.gov
- U.S. Department of Labor: dol.gov
- U.S. Department of the Treasury: Community Development Financial Institutions (CDFI) Fund: treas.gov
- U.S. Environmental Protection Agency’s Brownfields Home Page: epa.gov/browfields/

Foreign Trade Zones

- Foreign Trade Zones application guidelines: ita.doc.gov/import_admin/records/ftzpage/ftznew/newftz.htm
- Foreign Trade Zones: ita.doc.gov/import_admin/records/ftzpage/ftzhome.htm
- National Association of Foreign Trade Zones: imex.com/naftx.html

Funding

- AIF Group of Cargill Financial Services Corporation: aif.cargill.com
- Association of Local Housing Finance Agencies: alhfa.org
- Community Reinvestment Fund: crfusa.com
- Council of Development Finance Agencies: cdfa.net
- The Enterprise Foundation: enterprisefoundation.org
- Fannie Mae: fanniemae.com
- Freddie Mac: freddiemac.com
- The Grantsmanship Center: tgci.com
- Mortgage Bankers Association of America: mbaa.org
- National Association of Independent Public Finance Advisors: naipfa.com
- Rural Community Assistance Corporation: rcac.com

Incentives

- Advantage Southeast Economic Development in North Carolina: ncse.org
- Economic War Among the States: woodrow.mpls.frb.fed.us/sylloge/econwar/index.html
- ImpactDataSource - Economic and Fiscal Analysis Services: ritis.com/nat/com/ids/
- State Incentives, Programs & Policies Search Form: www-solar.mck.ncsu.edu/seach.html
International Trade

- Currency-Exchange: gwdg.de/~ifbg/currency.html
- ImfWorld Economic Outlook: imf.org/external/pubind.htm
- Infonation _Choose Countries: un.org/Pubs/CyberSchoolBus/infonation/e_infonation.htm
- International Trade Administration - 1-800-USA-TRADE: ita.doc.gov
- International Trade Links: csisteel.com/links3.htm
- Office Of Trade & Economic Analysis: ita.doc.gov/tradestats
- State Export Facts: ita.doc.gov/industry/otea/state/state_ex.html
- Taxation In Canada: dfait-maeci.gc.ca/english/trade/invest/60210.htm
- The Internationalist. The Center For International Business And Travel: internationalist.com
- The Office Of Trade And Economic Analysis: ita.doc.gov/td/industry/otea
- US State Department- Travel Warnings and Consular Information: travel.state.gov/travel_warnings.html
- Us Trade Representative: ustr.gov

Local & State Government

- Council of State Community Development Agencies: coscda.org
- International City/County Management Association: imca.org
- National Association of Counties: naco.org
- National Association for County Community and Economic Development: nacced.org
- National Association of Development Organizations: nado.org
- National Association of State Development Agencies: nasda.org
- National Association of Towns and Townships: natat.org
- National Conference of State Legislators: ncsl.org
- National Governor’s Association: nga.org
- National League of Cities: nlc.org
- State Rural Development Councils: rdev.usda.gov
- US Conference of Mayors: usmayors.org

Job Hunting

- IEDC links: iedconline.org/jobmart/index.php
- Federal Jobs: fedworld.gov/jobs/jobsearch.html
- Monster.com
- SEDC links: sedc.org/ijobs.asp?sedc_jobs

**Labor**

- DOL- BLS Selective Data Access: bls.gov/sahome.html
- America’s Career InfoNet_ Wages and Trends: acinet.org/acinet/occ_sea1.htm
- Economic Research Institute: Wage, Salary & Cost of Living: ereri.com
- Bureau Of National Affairs (Labor Data): bna.com
- Covered Employment And Wages (ES-202) Home Page: bls.gov/cewhome.htm
- Department Of Labor: labor.gov
- EmpPolicy Foundation Databases: epf.org/data.htm
- Guide to Salary, Human Resource/Personnel site: claytonwallis.com/otherhr..htm
- IGC_Labornet Directory: igc.org/igc/ln/resources/unionpages.html
- IMD's Workers' Compensation Insurance Publications: cbs.state.or.us/external/imd/wc_ins.html
- OSHA Standard - Industry Profiles: osha.gov/oshstats/std2.html
- Productivity- The American Workplace, 1996: epf.org/labor/ei20.htm
- Register of Labor Organizations: http://www2.dol.gov/
- RightTo Work States: http://www2.dol.gov/
- Technology Transfer Office: techtran.msfc.nasa.gov/
- The Employment Policy Foundation: epf.org/index.asp
- UsDol - Employment Standards Administration: dol.gov/esa/welcome.html
- Usworkforce.OrgHome Page: usworkforce.org
- W.E.Upjohn Institute For Employment Research: upjohninst.org/
- OSHA Statistics & Data: osha.gov/oshstats/index.html

**Maps & Clip Art**

- 3GOn W3_ The Great Globe Gallery: hum.amu.edu.pl/~zbzw/glob/glob1.htm
- Dave’s House Of Clipart: zdnet.com/downloads/clipart/
- Expedia.Com: maps.expedia.com
- Joe Sent Me: Home Page for Business Travelers: zyworld.com/brancatelli
- MapStats: census.gov/datamap/www/
- Mapblast!Maps, Driving Directions, Yellow Pages & Traffic Reports: mapblast.com/myblast/index.mb
- MapQuest: mapquest.com
- Maps Of The United States: lib.utexas.edu/Libs/PCL/Map_Collection/united_states.html
- MisnetTopology Map: mcsr.olemiss.edu/misnettop.html
- TigerMap Server - Mapsurfer: tiger.census.gov/cgi-bin/mapsurfer
- Yahoo!Maps: maps.yahoo.com/yahoo/

**News (General)**

- ABCNEWS.Com
- Bloomberg
- CBS
- CNBC-DowJones Business : business.cnbcdowjones.com
- CnetToday - Technology News : stream.cnet.com
- Cnn.com
- CNNVideoselect : cnn.com/video/netshow
- economist.com
- FoxNews
- MercuryCenter : bayarea.com/mld//mercurynews
- MSNBC : msnbc.com/m/v/video-news.asp
- NBCi.Com
- Newspaper
- Newspaper Association Of America : newspaperlinks.com
- Newsweek
- NY times
- Time
- USAToday.com
- usnews.com
- WiredNews : wired.com/news

**Quality of Life**

- Travel Industry Association- Discover America: seeamerica.org/default.asp

**Reference Library**

- A Blue Book Of Grammar And Punctuation: grammarbook.com
- American List Council: amlist.com
- Area Code Look-Up: 5551212.com
- Big book Directory Search: bigbook.com
- Encyclopedia Britannica: britannica.com
- Common Errors In English: wsu.edu/~brians/errors/errors.html
- Compound Interest Calculator:
moneychimp.com/calculator/compound_interest_calculator.htm
- Consumer Price Index (CPI) Conversion Factors:
  oregonstate.edu/Dept/pol_sci/fac/sahr/cv2002rs.pdf
- Efax.com home page: home.efax.com/s/r/eFaxHomepage
- ELibrary: ask.elibrary.com
- Encarta Home: encarta.msn.com
- Encyclopedia.Com
- FipsCodes: itl.nist.gov/fipspubs/0-toc.htm
- Get Organized Now. Tips And Ideas: getorganizednow.com
- InformationPlease On-Line Dictionary, Encyclopedia, Atlas & Almanac:
  www.infoplease.com
- Information Superlibrary: macmillan.com
- Land-Grant Training Alliance Online Lessons: lgta.org
- Libraryspot- Encyclopedias, Maps, Libraries And More.: libraryspot.com
- MetricAnd English Conversions:
  http://www.psinvention.com/zoetic/convert.htm?Hexadecimal=mile&Dot
  =km&Hack=600
- Microsoft Office Training: computersoftomorrow.com
- Microsoft Office Template Gallery Home:
  officeupdate.microsoft.com/TemplateGallery/default.asp
- Rensselaer Libraries' Ready Reference Page:
  lib.rpi.edu/resources/references
- ResearchingCompanies On The Internet - A Tutorial:
  home.sprintmail.com/~debflanagan
- Research-It!: itools.com
- Roget’s Thesaurus Search Form:
  humanities.uchicago.edu/forms_unrest/ROGET.html
- Statistics Every Writer Should Know: robertniles.com/stats
- CIA World Factbook: cia.gov/cia/publications/factbook
- ZIP Code lookup: usps.com/zip4
- Wordsmyth Search: wordsmyth.net
- WorldBook Encyclopedia Home: www2.worldbook.com
- Writing Help: ruthvilmi.net/hut/LangHelp/Writing/index.html
- Wwwebster Dictionary: m-w.com/netdict.htm
- International Dialing Codes: kropla.com/dialcode.htm

**Search Engines** (all end with .com unless otherwise noted)

- Google
- Yahoo
- Lycos
- Askjeeves
- Altavista
- Alltheweb
- MSN
- Hotbot
- YellowPages
- DirectHit
- MetaCrawler
- BrowserSpy : gemal.dk/browserspy/
- NetSearch
- dNET- Searchable Directory Databases : d-net.com
- Excite
- NorthernLight
- LookSmart
- WebCrawler
- Overture
- Momma.com
- Dogpile
- BellsouthElectronic White Pages : bellsouth.com
- BellsouthYellow Pages ONLINE : yp.bellsouth.com
- Bestyellow.Com- 300 Yellow Pages Worldwide! : bestyellow.com
- Go.Com

Note: Google is by far the largest and is often attached to servers as a default search engine.

**SIC-NAICS**

- How To Navigate the NAICS Correspondence Tables and Index: census.gov/epcd/www/naicsnav.htm
- SicSearch: osha.gov/oshstats/sicser.html

**Shipping Costs**

- FreightCenter.com

**Site Selection**

- DestinationSouthlink.com
- American Community Network: acn.net
States (General):

- 50 States and Capitals: 50states.com
- State Unemployment Insurance Rates: payroll-taxes.com
- State Comparisons: Econ. Dev. Info. Services: NC Dept. of Commerce: cmedis.commerce.state.nc.us/state
- Source for News on State Policy Innovations: stateline.org
- The States Inventory Project- State Information Infrastructures: states.org

Technical Support

- Microsoft: support.microsoft.com
- Apple: apple.com/support/
- IBM: ibm.com/support/
- Dell: support.dell.com
- HP/Compaq: www7.hp.com/support/home/index.asp
- Intel: intel.com/support: ti.com/corp/technical_support.htm

Technology/Telecommunications

- Alliance for Community Technology (ACT): act.ummu.umich.edu
- Appalachian Center for Economic Networks (ACEnet): acenetworks.org
- The AT&T Learning Network: att.com/learningnetwork/
- City Skills: CitySkills.org
- Community Technology Institute: cvm.org
- Digital Divide Network: digitaldividenetwork.org
- Foundation for Rural Service: frs.org
- The Kellogg Foundation: wkkf.org
- National Indian Telecommunications Institute (NITI): niti.org
- National Technical Information Service: ntis.gov
- National Technology Transfer System: ntte.edu/gov/default.asp
- The Technology Access Foundation: techaccess.org

Training and Technical Assistance

- Corporation for Enterprise Development: cfed.org
- The Ewing Marion Kauffman Foundation’s Entrepreneur Training: emkf.org
- National Affordable Housing Training Institute: nahiti.org
- National Congress for Community Economic Development: ncced.org
- Neighborworks: nw.org/NWIS/home.asp
Taxes

- State and Local Payroll Taxes: payroll-taxes.com
- State and Local Taxes: taxsites.com/state.html
- State Unemployment Insurance Rates: payroll-taxes.com
- FTA State Taxes and Structure: taxadmin.org/fta/rate/tax_stru.html

Transportation

- National Transportation Data Archive (NDTA): bts.gov/ntda/
- Department Of Transportation: dot.gov
- FAA- Federal Aviation Administration: faa.gov
- Federal Highway Administration Home Page: fhwa.dot.gov
- FHWA Highways Electronic Reading Room fhwa.dot.gov/pubstats.html
- OHPI- Highway Data: fhwa.dot.gov/ohim/ohimpro.htm
- Railroads And States (4.5): aar.org/rrstates.nsf/
- The Truck Net Online E-Mall: truck.net/store/

US Industrial Outlook

- Outlook Trends Tables: ita.doc.gov/industry/otea/usito98/tables.htm
- BEA--national accounts data: bea.doc.gov/bea/dn1.htm
- US Industry and Trade Outlook: ntis.gov/product/industry-trade.htm

US Government - Other Info Sources

- Federal Web Locator: vclip.org/Fed-Agency/fedwebloc.html#search
- Fedforms: fedsoft.com/
- FedworldInformation Network Home Page: fedworld.gov/
- Government Sites: alaska.net/~johnm/pub/av_link1.html
- Government Information Sharing Project: govinfo.kerr.orst.edu
- Library Of Congress Thesauri Home Page: lcweb.loc.gov/lexicon/
- National Archives And Records Administration: nara.gov
- National Transportation Data Archive (NTDA): bts.gov/ntda/
- Social Security Online: ssa.gov/SSA_Home.html
- The White House: whitehouse.gov/
- THOMAS-- U.S. Congress On The Internet: thomas.loc.gov/
- US Code: www4.law.cornell.edu/uscode/
- USFederalism Web Site: www.min.net/~kala/fed/econ.htm
- US Government - List Of Departments: nttc.edu/gov/departments.html
- US Government Information Sources - Home Page: nttc.edu/gov-res.html
- US House Of Representatives: house.gov
- US Postal Service: usps.gov
- US Senators: senate.gov/senator/index.html

Weather & Travel

- Amtrak: amtrak.com
- Priceline.com
- DeltaAir Lines: delta-air.com
- Yahoo!Travel: travel.yahoo.com
- ExpediaTravel: expedia.com
- SouthwestAirlines: southwest.com
- USATODAY: usatoday/weather/wfront.htm
- CNN Business Traveler’s Advisory: cnn.com/WEATHER/
- Tornado Project Online: tornadoproject.com
- NationalWeather Service Welcome Page: tgs5.nws.noaa.gov/
- SouthEast Weather: intellicast.com/weather/seast/
- Weathernet: cirrus.sprl.umich.edu/wxnet/
- Weather Channel Home Page: weather.com

Workforce Development

- America's Job Bank: agb.dni.us
- America’s Jobs Network: usworkforce.org
- Goodwill Industries: goodwill.org
- John J. Heldrich Center for Workforce Development: heldrich.rutger.edu
- National Workforce Assistance Collaborative: ed.psu.edu

Miscellaneous

- EDSS Online: edsonline.com
- Hoaxbusters: hoaxbusters.ciac.org
- Product Online Surveys: zoomerang.com
Appendix B: Glossary of Basic Computer Terms of Interest to Economic Developers

Commonly used terms

ASP- Application Service Provider, a third-party entity that manages and distributes software-based services to customers across a wide area network (WAN) from a central data center.

Bandwidth- The amount of data that can be transmitted in a fixed amount of time. For digital devices, the bandwidth is usually expressed in bits per second (bps) or bytes per second. For analog devices, the bandwidth is expressed in cycles per second, or Hertz (Hz).

Bit- Short for binary digit, the smallest unit of information on a machine. A byte is composed of 8 consecutive bits.

Broadband- a type of data transmission whose wiring can carry several channels simultaneously. Single channel communication is known as baseband, and is used for the majority of LANs. Cable TV and Internet access is usually broadband.

Browser- Short for Web browser, a software application used to locate and display Web pages. The two most popular browsers are Netscape Navigator and Microsoft Internet Explorer. Both of these are graphical browsers, which means that they can display graphics as well as text. In addition, most modern browsers can present multimedia information, including sound and video, though they may require plug-ins for certain presentations.

Byte- Abbreviation for binary term, a unit of storage capable of holding a single character. On almost all computers, a byte is equal to 8 bits. Large amounts of memory are indicated in terms of kilobytes (1,024 bytes), megabytes (1,048,576 bytes), and gigabytes (1,073,741,824 bytes).

Commerce server- Web software that runs some of the major functions of an online retail page such as product display, online ordering, and inventory management. The software works with online payment systems to process payments.

Dial-up access- see ISDN

Digital divide- a term used to describe the gap between people who have access to and the resources to use new information and communication tools, mainly the Internet, and

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people who do not have the resources and access to the technology. The term also
describes the discrepancy between those who have the skills, knowledge and abilities to
use communication technology and those who do not. The digital divide can exist
between those living in rural areas and those living in urban areas, between the educated
and uneducated, between economic classes, and on a global scale between more and less
industrially developed nations.

DSL- Refers collectively to all types of digital subscriber lines. DSL technologies use
sophisticated modulation schemes to pack data onto copper wires. They are sometimes
referred to as last-mile technologies because they are not used between switching
stations, only for connections from a telephone switching station to a home or office.

E-commerce- short for electronic commerce. Basically a blanket term for all business
conducted online, including the use of electronic data interchange, or EDI.

EDI- the transfer of data using online networks, mainly the Internet.

Extranet- an intranet that allows outsiders access through the firewall at differing levels.
Usually this requires an account with a password.

Fiber Optic- A technology that uses glass (or plastic) threads (fibers) to transmit data. A
fiber optic cable consists of a bundle of glass threads, each of which is capable of
transmitting messages modulated onto light waves.

Firewall- a system designed to prevent unauthorized access to or from a private network.
Firewalls can be installed on both hardware and software.

FTP- File Transfer Protocol, a format used on the Internet for exchanging files. FTP
works in the same way as HTTP for transferring Web pages from a server to a user's
browser and SMTP for transferring electronic mail. FTP is most commonly used to
download a file from a server using the Internet or to upload a file to a server (e.g.,
uploading a Web page file to a server).

GIF- graphics interchange format, a type of file format often used for color transmissions,
such as clip art. See also JPG.

GIS- stands for Geographic Information Systems. GIS tools gather, transform,
manipulate, analyze, and produce information related to the surface of the Earth. This
data may exist as maps, 3D virtual models, tables, and/or lists. GIS maps are often used
by ED agencies and consultants in the site selection process.

GPS- stands for Global Positioning System. GPS satellites can calculate exact longitude
and latitude measures. GPS is especially useful in conjunctions with GIS systems in
cartographic ED efforts.
**HTML** - HyperText Markup Language- the code that constitutes the basis for formatting and displaying the majority of web pages.

**HTTP** - Hyper Text Transfer Protocol- similar to HTML, a major code that determines web page transmission.

**Hardware** - the tangible parts of a computer system, including drives, monitors, printers, scanners, and any related physical device. See also software.

**IDSL** - Short for ISDN Digital Subscriber Line, a method of providing DSL technology over existing ISDN lines. IDSL circuits typically only carry data (not voice). The major benefits of switching to IDSL from ISDN include: always-on connections, thus eliminating call setup delays; flat rate billing, instead of per minute fees; and transmission of data over the data network, rather than the PSTN.

**Intranet** - an online network designed for restricted access to members of a particular organization. Access is usually given by password.

**ISDN** - Integrated Services Digital Network, one of the main means of transmitting voice, video, and data over telephone lines. Also commonly known as “dial up” access.

**ISP** - Internet Service Provider, a company that provides Internet access to a client, usually for a monthly fee.

**IT** - Information Technology, a broad term encompassing all aspects of information, especially within the computer and telecom industries.

**JPEG** - Joint Photographic Experts Group- a type of file format most often used to transmit photographs electronically. See also GIF

**LAN** - Local Area Network. A computer network that generally covers a small geographic area. Several LANs can be linked to a WAN, or wide geographic area. Most LANs are restricted to one building or organization.

**Listserv** - an automatic mailing list server that also acts as an online discussion group. Listservs are sent by email and are restricted to members only.

**MIS** - Management Information Systems or Services, a broad term referring to all computer-based systems in an organization designed to assist managers with efficient departmental management. MIS includes management of both projects and personnel.

**OC-1, OC-3, etc** - Short for Optical Carrier, used to specify the speed of fiber optic networks. The higher the number, the greater the speed, measured in megabytes per second (mbps).
Operating system- the main program that runs a computer. The most common operating systems for personal computers are: DOS, OS/2, Windows, and Linux.

Packet- a portion of a message transmitted via a protocol.

Protocol- an agreed-upon format for transmitting data between two devices.

POP- 1) post office protocol- used to retrieve mail from a mail server. 2) Point of presence- a physical location owned by the telecommunications provider that serves as a hub for telephone and internet transmission.

PDF- Portable Document Format, a type of file developed by Adobe Systems to facilitate the transfer of documents created and/or scanned by most desktop publishing software. The Adobe Reader program is needed to access PDF files.

PSTN- Public Switched Telephone network- analog telephone lines in contrast to newer, digital technologies, such as ISDN.

Search engine- a program that searches documents for specified keywords for retrieval. Online search engines are listed above.

Server- a computer or device on a network that manages network resources. Servers often manage networks, files, or printers.

SMTP- Simple Mail Transfer Protocol- a system for sending email between servers over the internet.

Smart Building- a term generally used to describe a spec building already wired with the latest telecommunications access technology.

Software- computer data or instructions that cannot be physically examined, as opposed to hardware. Software refers both to application programs that do work for users and operating software programs that run a computer.

Spam- electronic junk mail, usually unsolicited. Spam is a problem on a large scale due to lost data space and costs to block or eliminate it.

T-1- a phone connection that carries 24 individual channels of voice or data traffic.

T-3- similar to T-1, T-3 carries 672 channels and operates at a faster speed.

TCP/IP- Transmission Control Protocol- enables two host servers to establish a connection for a stream of data.
Teleconferencing- to hold a conference via phone connection. Helps to reduce travel costs.

**URL**- Uniform Resource Locator, a web page’s address.

**USB**- Universal Serial Bus, one of the most common means to connect hardware since approximately 1998. USB ports are standard on many computers.

**Video conferencing**- uses video cameras and online connections to conference. Steadily gaining in popularity due to both improved technology and risks associated with travel.

**Virus**- a type of self-copying program designed to disrupt computing systems.

**WAN**- Wide Area Network, generally a linkage of several LANs over a larger area or between several organizations.

**Webcast**- To use the Internet to broadcast live or delayed audio and/or video transmissions, much like traditional television and radio broadcasts.

**Wi-fi**- short for wireless fidelity and used in conjunction with wireless internet networks.

**XML**- short for extensive markup language, a paired-down version of SGML, designed especially for web documents.