



IT IN ACTION: Information Technology in the Workplace

COLLABORATIVE/GROUPWARE APPLICATIONS

Most work environments today use some form of Groupware/Collaboration applications to manage work group projects and communication. Groupware applications are used to facilitate the work of work groups or teams. Organizing, storing, maintaining, retrieving, and sorting messages, contacts lists, tasks, and schedules, shared files between coworkers are critical activities that enable workers in companies and organizations to work and exchange information effectively together.

COMPUTER-BASED EQUIPMENT

Arts, AV Technology, & Communications

Professional musicians use computer-based equipment to:

- Create printed musical scores for performance applications (Finale, Sibelius)
- Create multi-track sound recordings for release on CD or as MP3 for uploading to music services (Pro-Tools, Digital Performer).
- Create MIDI (Musical Instrument Digital Interface) files to be used in live performance or recording applications (Digital Performer, Cubase).
- Compose music using existing music samples or “loops” (Garageband, Reason, Acid)
- Synchronize music composed for a specific action, event or moment in time, particularly in film and video (Digital Timepiece and others)

COMPUTER OPERATIONS

Most people who use computers employ various computer operations applications in similar ways to customize applications, e.g., changing toolbars on the desktop in a word processing program to suite work requirements or personal preferences and to compress/uncompress large files using compression software such as WinZip.

DATABASE APPLICATIONS

Law, Public Safety, Corrections, & Security

LPSCS agencies use databases to archive personnel data such as drivers license information, specialized training records and classifications, equipment certifications/credentials. Information from these databases is utilized to dispatch and deploy qualified trained personnel to incident scenes and to respond to insurance inquiries, defense or prosecuting attorneys if part of a case, public interest groups, newspapers or reporters might have access to information.

Transportation, Distribution, & Logistics

Shippers and marketers use database analyses to identify current and historical trends in customer demands to determine the flow of materials to individual customers and domestic and international regions. The data can also be used to determine customer service levels including overage, shortage and damage (os&d), inventory levels, customer returns, and mis-ships.

ELECTRONIC MAIL APPLICATIONS

Arts, AV Technology, & Communications

Telecommunication field technicians use email and text messaging to contact each other and their central offices to resolve technical problems such as connectivity issues, for

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updates on resolution of problem being researched by someone at the central office, and for installations and troubleshooting configurations.

Online communication is an important part of professional photography. Photographers need to be able to send, share, and discuss the pictures with clients, bosses, and/or their editor at a publication.

Hospitality & Tourism

Email is critical for the travel industry and used by small and medium-sized travel agencies to communicate to the client a confirmed itinerary and any action on the itinerary, such as confirmed travel information (travel itineraries, airline tickets, hotel reservations).

GLOBAL POSITIONING/GEOGRAPHIC INFORMATION SYSTEMS (GPS/GIS)

Architecture & Construction

Civil engineers use GPS units and GIS applications for infrastructure maintenance for cities/towns, school campuses, housing subdivision developments, etc. For example, a college campus may need to have the location of all the subsurface drainage outlets to check them annually for blockage; a city might need the locations of all sidewalks, their conditions, and surrounding features to stay compliant with ADA standards.

In pipeline/facilities construction, the asset location data (raw data from the GPS receiver: latitude/longitude, elevation relative to sea level, and time of day) is organized into 2-D or 3-D maps using a GIS application. If the pipeline is regulated by the Federal government, the data are filed as a map with the Department of Transportation (DOT) to update DOT's existing information or to provide DOT with information on a newly mapped area.

Agriculture

Environmentalists use GPS-GIS to track environmental plumes (nitrates leeching through the soils) and phytoremediation (planting trees to absorb water and nitrates in the soil to prevent nitrates from leeching into streams).

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Travel writers use GPS receivers in the field to plot and record waypoints of a particular area to create specialized maps that accompany their stories of the area. The maps may be embedded in the story or come as a separate pullout sections for readers and are found in travel magazines, the travel sections of newspapers, and books on travel.

In telecommunications companies, clocks in the central offices need to be synchronized globally to facilitate communications. Companies use GPS to get a signal for their stratum clocks.

INTERNET BROWSER APPLICATIONS

Hospitality & Tourism

Meeting planners use the Internet to access travel message boards (such as tripadvisor.com, travelmole.com) and obtain information about current customer satisfaction with different hotels and conference facilities. Current information is vital for planners as things may have changed since the planner's last visit: e.g., new management, different season than when they visited the property, construction in the area.

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Law, Public Safety, Corrections, & Security

Correctional Officers and Probation and Parole Officers use the Internet to review policies and procedures from other jurisdiction websites. For example, a correctional officer transferring an inmate to a corrections facility in another state needs to check that state's interstate compact agreement to find out the type of inmates they accept (such as sexual predators, sex offenders, habitual and/or violent offenders), and the state's policies and procedures for inmate transfers. (Policies and procedures differ from state to state.)

Fire agencies upload incident data reports to the NFIRS National Database and run daily reports against the incidents that were uploaded.

Lawyers, paralegals, and legal assistants research information relating to specific case topics to prepare for a client's defense: e.g. 1) in a case involving a college student accused of cheating, the firm might search for information on plagiarism, academic dishonesty, and academic institutional policies regarding these types of behaviors; 2) in a sexual harassment case, the firm might search for information on sexual harassment policies at different companies or organizations.

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Event and wedding photographers use the Internet to showcase portfolios of their work and to upload proofs such as a client's wedding photos. The Internet allows photographers to give their clients immediate product turnaround and to sell to clients more directly. This results in faster sales, reduction of ordering time, increased client satisfaction, and maximizes the value of the photographer's time by reducing workload.

PERSONAL INFORMATION MANAGEMENT (PIM)/PRODUCTIVITY

Most photographers have a big scheduling component which has to be well managed, especially in free-lance photography and photojournalism. Spending more time in the field than in their home offices, freelance photographers use palm pilots to plan and manage their schedules and client information.

PRESENTATION APPLICATIONS

Health Sciences

In the Nursing, presentation applications are used for:

- Presenting topics for continuing education at nursing conferences
- Teaching new protocols to nurses using CD-ROM Training Modules
- Educating parents and teens on various health issues (community health settings)
- Orientating new nursing staff at hospitals and clinics
- Sharing knowledge with nursing peers in journal clubs
- Cross-training of the nurses in other specialty areas in hospitals

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- Training officers at federal agencies such as The Bureau of Alcohol, Tobacco, Firearms, & Explosives (AFT) use presentation applications to train firefighters for certification as specialized arson investigators.
- Public Information Officers use presentation applications to brief community residents on how to avoid becoming a victim of identity theft.
- Physical security specialists use presentation applications to conduct workshops for building occupants or employees of an organization on appropriate safety and security procedures.

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Manufacturing

Engineers create presentations as part of a company's product line exhibit for manufacturing trade shows. These presentations are usually designed to run in a continuous loop.

SPREADSHEET APPLICATIONS

Agriculture

Farm managers use spreadsheets to create an electronic depreciation schedule to track the depreciation of large, expensive farm equipment, such as a combine. The annual depreciation value is a major tax deduction for the business.

Education & Training

Teachers use spreadsheets to create and manage budgets for class projects and after school activities and programs. Teachers and principals also use spreadsheets for statistical reporting and analysis of data such as student achievement/improvement in specific subjects such as math and science.

Hospitality

Purchasing supervisors at large hotel properties use spreadsheets to create logs to track packages received for guests who have reservations with the hotel but have not yet check in. Logs contain information about when the package was received, where it is being stored at the hotel property, and is stored on the hotel property's shared drive [local area network/LAN] so it can be access by all hotel staff.

Science, Engineering, & Math (STEM)

Environmental chemists and engineers use spreadsheets to plot and compare the ingredient distribution of air quality samples and calculate the average, total amount and standard deviation of each compound for the principal pollutants.

Transportation, Distribution, & Logistics

Sales personnel use spreadsheets to calculate their distribution cost data to develop service levels based on the cost parameters that their customers require.

WRITING/PUBLISHING APPLICATIONS

Arts, AV Technology, & Communications

On-location directors of film and video in collaboration with the cinematographer use script writing programs such as Master Scene or Final Draft to make script notes for each shot and scene of the script. The notes detail the specific tasks for every crew member involved with the production: the photographers, gaffers, boom men /sound mixers, key grips, first assistant director, stunt directors, and second unit directors.

Education & Training

Elementary school principals use word processing applications to create school bulletins to apprise parents and teachers of the monthly school calendar, upcoming special events, and special announcements.

Law, Public Safety, Corrections, & Security

Patrol officers and detectives use word processing applications to write evidence reports which include the "who, what, when, where, why"; the evidentiary chain (i.e. the routing of who has touched and/or examined the evidence); and information about the relevance of the evidence to the case (i.e. the "why").