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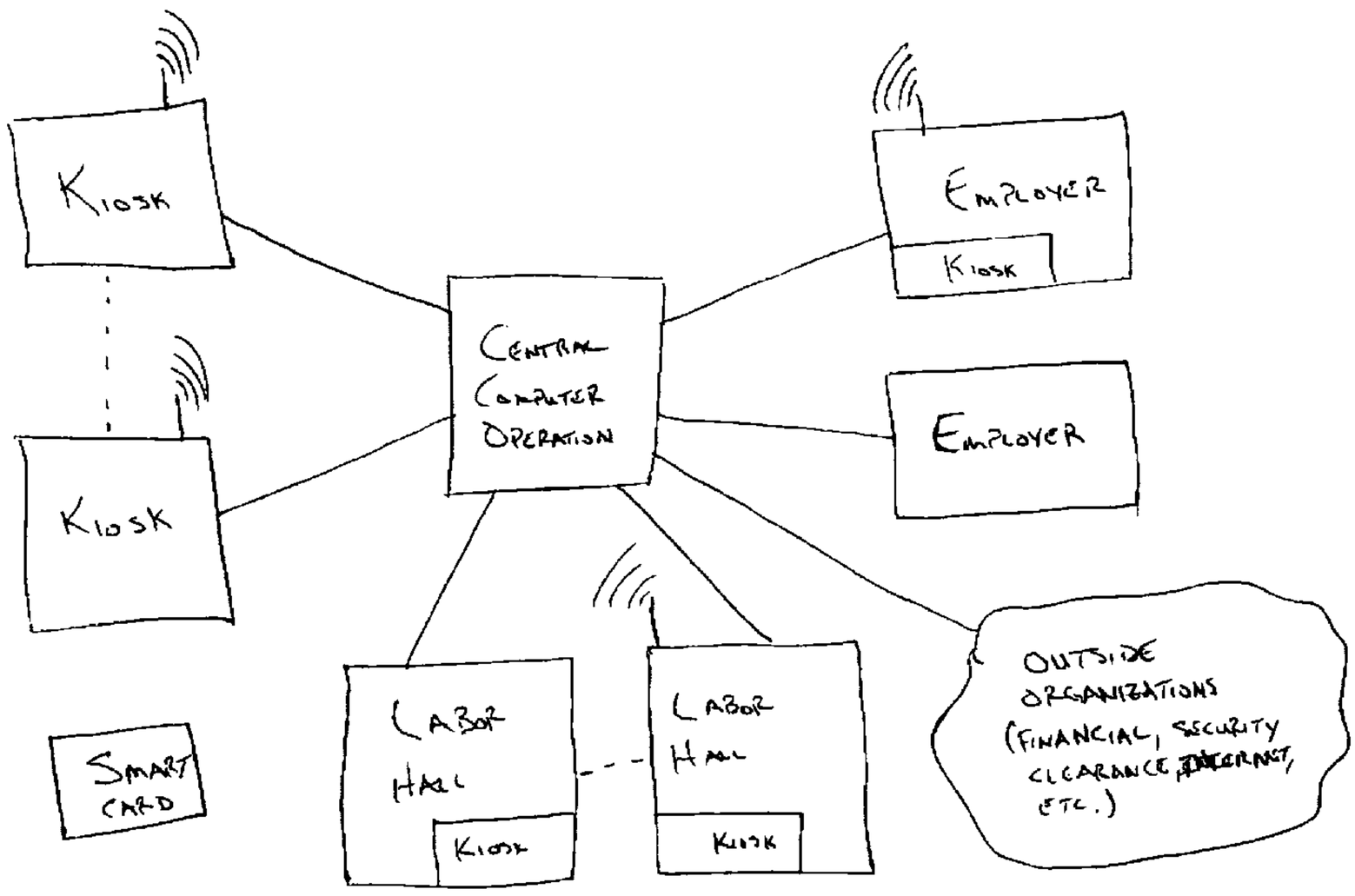
(54) **APPAREIL ET PROCEDE POUR DES SERVICES AUTOMATISES DE SOUTIEN DE L'EMPLOI**

(54) **APPARATUS ADN METHOD FOR AUTOMATED EMPLOYMENT SUPPORT SERVICES**



(57) There is disclosed an integrated employment services system allowing an employment staffing company or a human resource department to provide a predetermine set of services that are configurable and selectable within the system according to the needs of and costs/benefits to the provider, to the employee and to the employer. The novel system provides efficient and secure communication and exchange of data between and services to the agency, the employee and the employer needing employees.

CWCAS-126

ABSTRACT

Apparatus and Method for Automated Employment Support Services

There is disclosed an integrated employment services system allowing an employment staffing company or a human resource department to provide a predetermine set of services that are configurable and selectable within the system according to the needs of and costs/benefits to the provider, to the employee and to the employer. The novel system provides efficient and secure communication and exchange of data between and services to the agency, the employee and the employer needing employees.-

CWCAS-126

Apparatus and Method for Automated Employment Support Services

The Automated Employment Support Services system was disclosed to the U.S. Patent and Trademark Office on April 26, 1999 as "Apparatus and Method for Automated Employment Support Services," serial number 60/131,039. Priority is claimed to that filing date.

Background

The temporary staffing industry has been growing at a double-digit rate in the United States for several years. As of 1999, the American Staffing Association estimates that its members operated 13,000 offices in the 50 states, the District of Columbia and Puerto Rico. Growth of the industry is driven by employer need for increased manpower flexibility in the global market place, and by the increasing scarcity and high mobility of workers having desired skills and experience.

Locating, hiring and retaining such workers is an ever-growing expense for employers. As is common in a free marketplace, employers will contract out work when it is more efficient for them to do so rather than performing the work in-house. The temporary staffing industry allows employers to obtain workers for jobs that are not permanent or too costly in terms of benefits. This is especially true for industrial type jobs that are short term. For example, the construction industry has a continual need for workers to support trade workers on job sites. Such workers perform the tasks of unloading materials, digging trenches and cleaning the workplace of scrap material. The need of these workers varies day to day depending on delivery schedules and weather. Trade workers themselves are often supplemented at times during the construction schedule to maintain or catch up according to the schedule.

To eliminate unnecessary overhead and maintain competitive costing, many employers look to temporary employment agencies to provide temporary workers. The industrial segment of the temporary staffing business accounts for approximately 35% of the total temporary staffing wages. For the industrial segment, the temporary staffing industry has unique benefits. It provides neighborhood-based clearinghouses

for day-to-day work opportunities geared to specific skills and experience. Workers visit the local labor hall on a daily basis for job assignments with any of several potential employers.

Once a worker has his/her application information on file and begins to build a reputation for being a reliable worker, the temporary staffing company becomes the equivalent of a permanent job with a reliable, caring employer. The labor hall provides transportation to and from the labor hall from pickup points within residential neighborhoods, gives the worker a job assignment for the day, and then takes the worker to the job site. At the end of the day, workers return to the labor hall with a pay slip issued and signed by the employer. The temporary staffing agency issues a paycheck, voucher or other pay authorization vehicle. The day workers take their pay and go to a check cashing service that exchanges the pay vehicle for cash for a service charge.

The labor halls, also known as dispatch centers, match the needs of employers looking for temporary workers with workers having specified skills and experience. Many workers favor a certain hall and start receiving assignments that are longer term than one day giving the temporary worker more stability and generally better wages.

The temporary staffing agency must maintain processes to locate and solicit jobs for the workers, and to locate and solicit workers for the jobs. The agency must also maintain all of the back office procedures and records to interview each temporary worker for experience and skills, past employment history and certain personal history. For certain jobs, the agency provides training to the workers and reviews performance to ensure the employer's job requirements are being served. Work hours and pay record accounting must be maintained with proper deductions for taxes and the agency's fee. Multiple systems, software packages, sets of records and other management techniques are used to serve the business functions required as a normal course of doing business.

Temporary workers also are affected by the inefficiencies of the current system. The employ must travel to the work hall to apply initially, as well as each day to get assignments. Then the employee must travel to the work assignment to begin being paid. At the end of the workday, the temporary employee must travel again back to the work hall, wait in line to turn in the work assignment slip and have a check issued. The check is then oftentimes cashed at yet another location before the employee can go home. To get paid for eight hours of work may require a 12-hour commitment from the employee.

The basic daily industrial staffing process includes the temporary employee, the support staff working for the labor hall and the support staff of the employer looking for temporary employees. The following is typical of an ordinary day interacting with a temporary staffing company without the benefit of the inventive system.

Support staff for both the labor hall and the client/employer begin well before the shift start identifying and finalizing service applications (requests for temporary labor) generated through sales persons, phone and fax. This effort continues throughout the day. Temporary employees begin arriving at the labor hall either on their own or by transportation from prearranged locations provided by the labor hall. Temporary employees already in the system are assigned day work and transported to the work site.

New/prospective employees begin a paper pre-application, including completion and signing of employment forms. The paperwork for these employees must be processed, and necessary checks, including work history, security, etc. can take up to two days for completion, processing, and review. During this time, the employee can be interviewed and, as certain parts of the initial process are completed, training for potential work can begin.

Once the initial process is completed and the employee is accepted for temporary work, the employee is told to report to the labor hall to be assigned work.

Employees wait at the labor hall to determine availability of work. The dispatcher (staffing company) receives work orders from employers and maintains a physical dispatch board through which temporary workers are assigned jobs as they show up and/or by client preference. Assignments must be matched by the dispatcher to available day workers based on their skills, abilities, experience, and training. Once the worker is informed of and accepts the work assignment, the day worker receives a work slip identifying him/her, the job and location. Finally, the day worker is ready to travel to the work site.

For some temporary employees with sufficient experience at the labor hall, contact with the dispatcher may occur by telephone, and travel to the work site may occur without going to the labor hall first. Then, other arrangements must be made to get the worker a work slip. The worker is not obligated to accept the job offered by the dispatcher, and may opt to wait for a better job assignment or decline work for the day.

Once at the job site, the worker logs/signs in with employer. The worker shows the work slip to the client supervisor or other authorized client representative, clock's in, and begins work. Either the client or the worker may retain the work slip during the day. The clock-in process is controlled by the employer with no way to verify accuracy for billing and payment, other than through word of driver and/or temp employees. Work, usually under supervision of the employer, finally begins. However, the staffing company may contract for both labor and supervision of crew operations.

At the end of the day, the employer determines credit for hours worked. The worker clocks out with the employer and the hours worked are noted on work slip. The slip is signed by an authorized supervisor or another authorized agent of the client and is returned to worker for submission to staffing company. The client may make notes on the slip about the employee regarding performance, desire to have the worker again or not , skill demonstrated, etc. If the slip is not signed, or is signed by an unauthorized agent of the client, the client may refuse to pay.

The worker carries the signed slip back to staffing company and submits it to the dispatcher as basis for computation of daily pay. The worker must then wait for the staffing company to issue a check. The dispatcher must carefully review the work slip to assure its genuineness, including a properly authorized signature and verifying the correctness of hours worked. Paper slips provide opportunity for falsification/forgery by the temporary employee and the employer, and both must know all paperwork will be carefully checked.

Once the work slip is verified and entered into the staffing company's system, pay is calculated and a paycheck is issued to the worker. The issued check is complete with a stub reflecting deductions for taxes, FICA, Medicare, travel and other additions or deductions as are appropriate to situation. The check is physically handed to worker by the dispatcher or staff. If the worker requests direct deposit of the pay, a receipt is issued. Throughout this process, workers must wait their turn to turn in signed work slips, have information checked and entered to the computer and receive their checks. This can take a significant amount of time particularly at peak demand or processing times.

The worker carries the issued check to bank for deposit or cash, or to another check-cashing venue such as a convenience store to receive cash. The check cashing facility charges the worker a transaction fee which is usually a minimum of $1, and can be 2.5% of the check amount or more.

Finally, the staffing company bills client, generally weekly, for hours worked by all employees. The staffing company provides an itemized list of hours reported to the dispatcher on signed work slips according to pre-agreed rates for workers of different skill and experience levels. The rates billed reflect wages paid to workers, related employer costs such as social security, appropriate Worker's Compensation based on employer business, type of work, other billable costs and the staffing company margin. The client receives the bill, verifies it against their records and issues a check to the staffing company. If there are discrepancies, they must be resolved by the support employees.

Some time saving solutions have been introduced to address this burdensome system. There are cash dispensing and minimal employment services kiosks in use. To date, however, none provides multiple, interrelated employment support functions using both the information storage and processing capabilities of a smart card and the capabilities of Internet-based eCommerce. Some check cashing machines use pin numbers and facial biometrics to authenticate identity, and are linked to a central database system only for check-cashing authorization purposes of cash payroll, government or personal checks. The check cashing is available with a magnetic strip card containing a pin number even when they do not have a bank account or photo ID with them at the time. Machines are located primarily in bank lobbies, grocery stores and similar locations where the machine host (e.g., the bank) benefits from the reduction of time, cost of check cashing services and from transaction fees and customer convenience.

Citibank enables setup of a payroll account for a company at a bank. The client company (employer) deposits total payroll, which is then distributed by the bank to individual, employee ATM-accessible accounts according to dollar amount instructions provided by the company. Fees are charged to the company for set up and loading of the employee accounts, and transaction fees are charged for each transaction when an employee uses a magnetic-stripe ATM card to withdraw cash from the account or transfers money in the account elsewhere. The employee may be charged an additional fee if the ATM used is not one operated by the bank with which the accounts are located. The accounts do not have other banking privileges such as checking.

The Swiss-based staffing firm ADECCO uses kiosks with a touch screen user interface as recruiting devices to find employees. Their kiosks are located in various U.S. shopping malls and the recruiting is aimed to a general audience of passersby. Visitors can use the touch screen to find out about job opportunities and complete a simple application. Similarly, Wal-Mart, Home Depot and others are utilizing in-store kiosk/PC workstations similar to the ADECCO system to solicit and accept generic employment applications. These workstations perform no payroll or cash

dispensing functions, or other employment services functions. Applications are forwarded to a central computer with follow-up by staff. Applicants must wait for staff to contact them with further information regarding employment.

Current business practices in the temporary staffing industry and in general business recruitment and hiring have weaknesses that create losses due to oversight and fraudulent claims. Errors recording and translating data from one system to the next, lost paperwork and forgotten or ignored tasks are inherent to paper-based systems. Altered time sheets and false claims of lost checks are problems associated with the transient nature of temporary employment. The general business tasks currently employed are labor-intensive increasing business overhead.

Temporary or transient worker are generally issued paper checks for pay, often on a daily basis. Traditional paper checks are expensive to process. Up to a dozen people handle each paper check, which are then transported from retailers' banks to U.S. Federal Reserve banks and ultimately to consumers' banks for payment. This labor-intensive and time-consuming process costs the United States about $181 billion a year, according to a Wall Street Journal article. A recent article in the St. Petersburg Times (Wednesday, October 27, 1999) indicated that, considering all entities involved in the process, it costs about $0.19 to process an electronic transaction as contrasted to $2.37 for a paper check. These costs are borne by the employee, who can least afford it, and by the employer.

The present invention solves these problems with an efficient integrated system providing automated employment support services.

Summary

The present invention provides an integrated employment services system allowing an employment staffing company or a human resource department to provide a predetermine set of services that are configurable and selectable within the system according to the needs of and costs/benefits to the provider, to the employee and to the employer. The novel system provides efficient and secure communication and

exchange of data between and services to the agency, the employee and the employer needing employees.

Brief Description of the Drawings

Figure 1 illustrates one configuration of the employment support services system.

Figure 2 illustrates one kiosk path a user may experience.

Figure 3 is an exemplary flow chart of a user experience at a kiosk.

Figure 4 is an example of a welcoming screen at a kiosk.

Figure 5 illustrates the simplicity of using an employment support services system kiosk.

Figures 6 and 7 illustrate screens viewed by the user to guide the user during use of the kiosk.

Figure 8 illustrates a screen that solicits information from a kiosk user.

Figure 9 illustrates a selection screen presented at a kiosk .

Figure 10 illustrates a marketing screen presented at a kiosk.

Detailed Description of the Invention

The inventive system that provides automated employment support services (ESS) is made up of an interactive kiosk, ATM-compatible cash-dispensing hardware, and related computers and software. These combine with multi-function employee smart-cards, the Internet, and other communication links to automate daily payroll processing including direct cash pay, employment application and testing, and other human resource management functions. The inventive system enables staffing companies and employers to better attract, serve and retain both temporary employees and client-employers resulting in increased efficiency of both their own and client-

employer operations. This increases revenue through reduced operating costs and licensing, leasing and transaction fees.

Kiosk-based functions are accomplished through interaction with employee smart cards and with the ESS website and central computer, and/or with the computers of staffing companies, employers, financial institutions and others. For example, after the number of hours worked in a day is loaded to a temporary employee's smart card, the employee may proceed directly to a ESS kiosk to receive cash for his/her day's work.

Alternatives to kiosks, or in addition to the kiosk, are computer terminals available at labor halls, employer's place of business and employee homes with access to the Internet. Once authorized, an employer or employee can load or download software to perform system activities. Even without software, persons with access to the Internet can go to the staffing company website and perform the functions described below.

Whereas this application focuses on industrial temporary staffing, the Automated Employment Support Services (ESS) system can be adapted to profitably serve diverse human resource management markets worldwide. The system's recruiting, employment application and testing capabilities have widespread adaptability, including the entire staffing/employee leasing industry, private employers, sources of payroll and other employment support services, and government agencies/programs.

The industrial temporary staffing industry is used as an exemplary model for describing the best mode of the invention because it has characteristics that the inventive system easily serves. Among these characteristics are the cash-based lifestyle of its workers and multiple operating units (labor halls) serving identifiable geographic areas. The staffing industry includes inefficiencies, costs and problems associated with paper-based systems of daily work assignment, reporting of hours and pay that the ESS system efficiently addresses. In addition, there is no apparent barrier

to smart-card acceptance and use by temporary industrial employees, since they have incentive to receive daily pay without travel to a remote check-cashing venue.

Temporary industrial staffing is rapidly growing and represents about 35% of the wages paid by the industry. From 1992 to 1995, temporary help employment grew at a rate of 17 percent. Since 1995, growth has slowed to a still healthy annual rate of 9 percent. In 1998, temporary help receipts increased 16.6 percent to $58.7 billion. It was the industry's seventh straight year of double-digit growth. Driven by the challenge of keeping up with business demand, staffing firms are increasingly turning to historically underused sources of labor. Recruiting efforts extended to populations such as retirees and individuals transitioning from welfare to work.

Marketing and deployment of a basic direct pay and recruitment functions system in the industrial staffing industry can generate immediate revenues because each unit sets in motion a monthly flow of cash, particularly from transaction fees, that can continue for the life of the machine. There is also substantial fee income other than from transaction fees, particularly from functions relating to recruiting and application processing/testing. Each kiosk may be wholly owned immediately from its initial purchase, or time purchased or leased separate from the remaining system. There are many entities controlling multiple staffing locations in the staffing industry representing high potential for multi-unit sales.

As shown in Figure 1, the ESS system embodies an interactive touch-screen kiosk with ATM-compatible cash-dispensing hardware and related computers and software. These combine with multi-function employee smart-cards, the Internet and other communication links to perform a potentially very broad range of interrelated employment support and personnel administration functions. Functions are accomplished both through the kiosk's interaction with employee smart cards, and through their combined interaction over communication channels and the Internet with a ESS central computer and/or with the computers and systems of employers, financial institutions and other organizations. Smart card security and interaction with the system is protected by a P.I.N (Personal Identification Number) and/or biometric

identification. Authorization of input to the system, for example, entering the number of hours worked, or results of payroll calculations on an employee's smart card, may also utilize biometric identification to affirm the identity of the employer or staffing company representative entering the data.

System hardware is made up primarily of off-the-shelf components. The cost of an individual unit may vary, since not all components of the remote kiosk need necessarily be deployed at a site depending upon the number and nature of system functions to be accessed at that site.

Smart cards constitute the preferred access and interaction key to the ESS system kiosks and other remote system access points. Smart cards are credit-card-size plastic cards with embedded microchip processors. These chips can store about 32 kilobytes of information, or about 100 times the data contained on a single magnetic stripe card, and have the capability of processing that information. Along with storing electronic funds, smart cards also incorporate databases and security devices. They are much less vulnerable to counterfeiting than magnetic stripe cards now available. Smart cards also can serve as vehicles for loyalty programs, store medical histories, and serve as access devices to buildings and other facilities.

Figure 1 further illustrates the multiple types of communication links available to remote pieces of the ESS system. Telephone lines connecting modems, broadband communication links, wireless communication and the like are all potential methods of linking the system together. In some cases, it may be desirable to have redundant communication links as a backup to the preferred communication link. It is not necessary to include all types of links at each piece of the system, as is shown by some of the remote links not including wireless links. Even the central computer need not have full communication capability. This is the decision of the system operator. The communication protocol or standard of a particular link is determined by the off-the-shelf hardware and associated used. Since there are all levels of reliability and security available in current hardware and software, the hardware and software actually used can be dynamic and change as better and less expensive choices become

available. All that is necessary is that the communication link be as reliable and secure as is currently available in current e-commerce transactions, such as e-banking.

The kiosk can also be a point of entry for employers through smart card access allowing a full range of ESS functions. Accessory ports may be included on the kiosk allowing smart card writers, printers, biometric readers and computers to be integrated and connected to the ESS system. Such employer-type connection is available directly from a computer, for example via a modem and telephone line connection, but the addition of the ports on the kiosk adds to the configuration capabilities of the kiosk. The added capability may be indispensable if limited phone lines are available, or if there is a hardware failure on a computer.

The kiosk/system is capable of providing or enhancing many employment support functions. These functions are selectable depending on the client's needs. Direct cash pay may be included at any kiosk. The kiosk functionality can also include other automated payroll functions such as payroll deductions and providing summary printouts. These payroll functions can be incorporated via a communications link with the central computer, or via the smart card by using the storage capability to store the information for access at a kiosk. Through information stored on the smart card and verification of the user, information can be retrieved from the central computer into the kiosk to provide desired services for the person using the kiosk. General automatic teller services and access to other electronic banking, Internet and related services may also be incorporated via a communications link.

Targeted recruitment of employees for particular jobs is provided through the touch screen menu, and can including advertising screens to draw the attention of passersby and users. The menu can include current listings of some or all available jobs that are searchable by type, skills, experience, employer and a variety of other parameters. If no particular job is found, but a person wants to be considered for future postings, a pre-application can be completed which lists interests, skills, education, limitations, etc. If someone finds a job that interests them, they may complete an application and submit it for consideration for that job or related jobs. In

either case, the system will process the pre-application or application, log it and report it accordingly for consideration.

Once a person is identified as qualified for a type of work, the person may directly access available job assignments of that type and indicate availability and order preference for any of the jobs desired. The system can then either automatically identify and assign a particular job or notify a work dispatcher for work assignment. Either way, the person can wait for the assignment and accept or deny the assignment. If the person denies the assignment, the system or dispatcher can then make another assignment or indicate no further assignments will be offered at that time. If the person refuses one or more assignments made automatically by the ESS system, the system can then alert the dispatcher. The dispatcher can then review the assignments and personal history of the person and make another assignment, decide not to make a further assignment at that time, or contact (i.e., telephone or send an email-type message) the person to determine if there is a job that the person will accept.

Once an assignment is accepted, the system, through its touch screen kiosks, informs the new employee of the next step. The system can arrange transportation if needed, give directions and reporting information, provide needed printed materials or confirm where to send such materials, schedule training and training locations, provide limited training, and provide any other information or communication necessary for that particular job. Needed printed materials can be work rules, safety requirements, employee benefit information and administration forms, client employment forms, security information, and the like.

The kiosk can also provide other services to a person once authorized to enter the system. Submission of electronic forms for benefits and requests for services are available if the kiosk is so configured. Internet access may be made available. The kiosk may even be configured with a digital camera to perform video conferencing or interviewing if desired. The services may also be provided for the employer/client to provide remote entry points into the ESS system to get reports and enter information as needed. Signature hardware can be provided as desired at a kiosk, generally in a

more secure location such as the labor hall or employer. A biometric identification can also be matched to the person and to the signature. If an actual signature is required, the biometric reader can authenticate the identity of the person and authorize the use of the stored signature as needed.

All of the above functionality may be provided at the desires of the kiosk provider/system operator and employer/client. Each of the functions can be provided as a complementary service or may be provided at a fee to the user, to the client or to both.

Kiosk hardware may be comprised of off-the-shelf components, including a multimedia-ATM machine, computer with monitor, smart card reader/writer, scanner recognition system (biometric security), card printer, signature recorder and system software. Not all kiosk components necessarily need to be deployed at a site. One workstation may involve only the cash-dispensing hardware and related smart card or magnetic strip card interactive components. Another may involve full touch-screen interaction with ESS website interactive employment application processing, information, training, and other aspects of the system including full ATM banking functionality.

For remote access, it is preferred that the smart card be the key for using the ESS system because of the storage capacity and security provided. Figure 2 illustrates the functionality allowed the system by using a smart card from the employee's perspective. The smart card stores in its memory security information allowing access to the system. The security may be increased by storing biometric information in the system or on the card itself to verify the user's identity as authentic and authorized. For example, a fingerprint, eye retina scan or other identification proof previously stored can be compared to actual readings taken by biometric devices at a kiosk, at an employer and/or at the labor hall.

Once access is attained to the ESS system, the user can determine available jobs, benefit information, enter medical claims, and any other service provided. At a

work site, the employee can clock in and out as needed during the day and hours automatically are tabulated. At the end of the day, the amount owed the worker can be automatically written to the smart card when clocking out. If the kiosk includes ATM capabilities, cash withdrawal may be made against the value on the card. All transactional information, past job history, qualifications and limitations may be stored on the smart card for access and evaluation by the system. Similar and/or corresponding access and functionality is available by the employer using the system via a smart card. All information can be immediately sent to the central computer for overall system management, storage, verification, billing, profile update, and any other desired function.

The ESS system provides a staffing company cost reduction and efficiency improvement through replacement of paychecks, work assignment slips, hours-worked documentation, and other business paper with electronic records and transactions that greatly reduce errors, tampering and physical loss. Printed copies are provided as a courtesy, but are not required. The efficiency of the system generates savings thereby increasing profit. The system also generates transaction and processing fees adding a new source of profit. Currently, check cashing by staffing companies is believed to be too risky without an ATM machine.

In general, the system provides the following advantages to a staffing company's business: simplification, time savings and cost savings relating to recruitment, training, work assignment, record-keeping, payroll administration, handling of checks, postage, benefits administration, and other aspects of human resource management resulting in decreased overhead and additional sources of revenue. This list of advantages is also applicable to employers looking for employees, because much of what the staffing company does is at the direction of and done in place of the employer.

For employees using the ESS system, the system provides the following advantages: rapid, no-hassle pay by check or cash, electronic funds transfer, concurrent and fast access to information about work opportunities, work

assignments, information and training, and optional use as a fully functional ATM. In some respects, the system may effectively become a shared computer for employees through which they can participate in on-line electronic banking, and have access to on-line web-based employment-related services, information, and training. The transaction process fees workers pay are more than offset by substantial reduction of time, travel, and cost required to obtain information and cash pay for work performed.

In addition to the benefits noted above for employees, employers and staffing companies, all of these groups gain from the significant reduction of problems and related costs and disputes caused by paper-based work assignment, and reporting of hours worked as the basis for employee pay and client billing. The minimization of errors, fraud opportunities and keeping track of the paper, in combination with authentication of records on the smart card and in employers and staffing company database, reduces these problems greatly. Further, it makes resolution of problems relatively easy.

The ESS system provides to the client/employer one or more kiosks and needed software and hardware configured to the client's feature requests and requirements. Back room software, that is software to calculate pay, deduct transaction fee, etc., may be included with the system or provided by the employer. This software may run on the client's computer or from the kiosk. If from the kiosk, the backroom software may be controlled by a computer storing the data and accessing kiosk functionality via a port. If the employer provides their own back room software, the system will accept information in a preformatted manner from an ASCII file, from an Access type database, from an ACH downloadable file or from other common data standards. This allows the client to purchase only those features needed and minimally impacts the implementation of the ESS system into the client's existing system.

The kiosk will provide instructions for kiosk and card use by visual steps, in writing through the video screen/touch screen, and through audio. Through these

means even workers who cannot read should quickly be able to use the machine without difficulty.

Through PIN protection and/or biometric verification, a found or stolen card will be of no value to other than the assigned worker. If a card owner is coerced by others to give his/her card and PIN, the amount available for withdrawal can be limited to the balance on the card or less if the owner of the card so chooses. Software on the card chips will be encrypted to reduce or eliminate potential for hacking. Ability to input hours-worked and payroll information can be protected by biometric identification of the person inputting the data thereby limiting such authorization of input to a few selected employer and/or staffing company personnel.

Kiosks may hold a substantial amount of cash immediately after servicing by an armored car company. Cash-dispensing hardware utilized will be obtained from established ATM manufacturers, and will contain their built-in anti-theft and break-in features. Most machines will be connected by a dedicated phone line to the staffing company's and/or the user's central computer providing immediate notification of any interruption of the connection, inappropriate tampering with the machine, or any attempt to withdraw an amount inconsistent with the machine's intended or normal function. Machines will be installed in such a way as to significantly reduce their potential for removal, e.g., bolted to the floor or to a concrete slab installed for that purpose. Machine theft and contents loss will be covered by insurance.

Figure 3 illustrates one possible experience for a user of an EES system kiosk. In step 300 the user, a potential employee, sees the screen of the kiosk displaying recruiting and/or marketing information that attracts his attention. Upon closer inspection and selection of touch screen prompts, the user sees marketing information for related products, services and employers in step 305. If a marketing banner or advertisement interests the user, the user can touch it on the screen to get more information.

Upon finding a particular job or employer that interests the user, an application for the particular job or employer is presented for completion in step 310. In step 315, the potential employee is given a skills test, perhaps a key entry test on the kiosk keyboard. Once this is completed, the potential employee is informed of confidentiality of information and the security used to protect his privacy, and prompted to enter information to perform necessary security checks, credit checks and past employment information in step 320. The employee is then informed where to bring proof of the information provided for verification. This is checked in person at a final interview. Whereas the ESS system provides efficiency beyond any previously known system, there will likely always be the need for meeting a person before employing them.

Once the user is given a job, he can be given information regarding employee identification in step 325, benefits in step 330, orientation in step 335 and training in step 340. Steps 325 to 335 can be accomplished in person if necessary, or by referral back to a kiosk for any of them. If referred to a kiosk for all but receiving employee identification, the employee enters his employee number or inserts his smart card holding his number, and is prompted for his PIN number and/or instructed to authenticate his identity through a biometric scan. Once identity is confirmed, the new employee is prompted through benefits in step 330, orientation in step 335 and training in step 340.

In step 345, the new employee is given his job assignment, schedule and reporting information. At the reporting time, the employee uses the smart card to record his arrival time in step 350. As instructed in orientation step 335, the new employee inserts his smart card to clock in and out at the appropriate time. This information is automatically reported to payroll in step 355, which calculates wages earned, necessary deductions and issues a paycheck, a direct deposit, or credits the smart card with pay credit as desired by the employee.

Over time, the employee periodically checks the kiosk and is informed of new assignments and schedules in step 360 as determined by the employer, and informed

of new policies, training and other employee/employer information, back in steps 335 and 340. The employee continues to use the smart card to clock in and out to record time for pay as in step 355. If pay credit is issued to the smart card, the employee can access a kiosk with ATM capabilities at any time and receive all or part of the credited pay in cash as determined by the employee and/or the employer. There may be a limit to the amount of cash distributed in any given time period as a security measure. The employee may also use a kiosk or a non-system ATM to access any direct deposit funds.

As is foreseeable from the above steps, it may be necessary for there to be a delay between one or more of these steps that requires the employee to exit the ESS system, and access it again at a later time. This is done as is described in the illustration above. Also, a magnetic strip card could replace the smart card, and information normally stored on the smart card could be stored in the ESS system central computer and accessed as needed. In the above steps, when the smart card or magnetic strip card is to be read from or written to in order to update information, such as when clocking in, clocking out or an employer adding value, alternative devices can be used. Such devices could be a hand-held, portable device with a card reader/writer, or a laptop computer with a card reader/writer peripheral.

The following discussion illustrates possible screens and information a kiosk user may experience with the ESS system. Figure 4 illustrates one possible introduction screen a user may see upon approaching an interactive kiosk. The word 'Employer' can be substituted for any business name and the emblem may be substituted for the business's emblem or trademark. Because the instructions direct problems to a user, this display would be presented at a kiosk where an administrator is available, such as at a labor hall. Other graphics and advertisement can be added as desired by the system operator.

Kiosks may have two screens, one for instructions such as standard ATM activities, and the other an interactive touch screen that provides communication to and visual aids for the ESS system. Audio instructions may also be provided to help

navigate through any process. Figure 5 determines if the user is a potential employee or a potential employer/client. Figure 5 also illustrates the ease with which users may navigate through the ESS system. Figures 6 and 7 show progressive video aids that have numbers illuminating steps through a particular process or choices from a selection list. As steps to a process are listed and explained, the corresponding step number is illuminated or flashes. Pressing it may provide additional information. If the numbers represent choices, then pressing one of them makes the users selection known to the system.

Figure 8 illustrates the welcoming screen to a user after selecting that they are looking for employment as shown in figure 5. Figure 9 exemplifies a personal information screen that a user completes during the application process. It gathers general and specific information needed to secure employment. The 'buttons' are touch screen locations leading to further screens with corresponding directions and information.

Figure 10 illustrates one possible job advertisement a user may see at various locations through the kiosk experience. It may be the ad that draws the user's attention, or it may be displayed in response to an entry from the user identifying possible relevance. This also exemplifies the flexibility of the ESS system, and the systems simplicity and user friendliness.

Referring back to Figure 1, a central computer system is the overseer of ESS system operations. With the advance of computer technology, there is sufficient computing power in a personal computer to operate the system. This allows more flexibility because a desktop or laptop computer is easily located in any office space. The communications network is made up of off-the-shelf components and may be no more than a Digital Service Line (DSL) that plugs directly into the computer. Remote locations, whether they be kiosks or employer/client computers authorized to access the system simply connect to the DSL line through the provider.

The central computer may be secured by any security method, including the use of a password, a smart card reader, a biometric reader or a combination thereof. This ensures that the system access is restricted to authorized users. The user may be further required to supply additional passwords or encryption keys to access highly sensitive and confidential information stored in the system. Access to the entire system may require encryption keys if desired.

The reason for such flexibility and access control is the database the central computer maintains. As described above, employee information stored in the central database ranges from name and address, to financial information, to employment history, to medical information. Client/employer information is also sensitive and includes financial information and potential trade secrets of the client. The central computer maintains a complete audit trail of all smart card and database operations in a format that cannot be modified. This prevents hiding any unauthorized use by authorized or unauthorized users.

Smart cards also maintain and utilize encryption keys to protect read/write data and functions. A complete audit trail is maintained on the smart card that is accessible and comparable to the audit from the central computer. The comparison is done at the kiosk. If improper use or activities are detected, the smart card and user access can be deactivated. If this happens the user is directed to contact the system administrator. The smart card may also be configured with an expiration date to prevent fraudulent use of lost or stolen cards. The expiration date may also prevent unauthorized use of certain features that should not be accessible after termination. Furthermore, the smart card identifies and notifies the employee of material that should be accessed while preventing other employees without authorization access to that material.

To the extent possible, a magnetic strip card provides the same functionality, but the central computer maintains storage instead of storing information on the card. Functionality is provided by accessing the database on the central computer over the communication link. Requests are transmitted from a kiosk to the central computer,

and the central computer can process the entire request and transmit the results back to the kiosk for display. Alternatively, once the central computer receives a request from a kiosk, needed information can be transmitted back and forth between the kiosk and central computer to provide functionality to the user with processing of the information occurring in the kiosk. This allows offloading of central computer processor demand to the kiosk as desired or needed.

The kiosk also maintains an audit trail of all use it services in non-volatile memory. It may download a smart card audit trail for comparison with a smart card audit as needed. The kiosk may also download and maintain a list of lost, stolen, deactivated or otherwise unauthorized smart cards from the central computer. The kiosk accesses authorization status for a user when use is initiated to maintain system security. The kiosk may have separate controllers for the ATM functions and for the ESS system functions. This provides an added measure of security for separating authorized levels of use. It also provides added reliability in that the failure of one subsystem does not necessarily affect the other system.

The kiosk may also provide payroll functions if the kiosk is offline from the ESS system. Because any or all of the employee's information can be stored on their personal smart card, identification of the employee and the value of pay earned may be verified independent of the central computer. If a cash withdraw is made against the value of stored on the smart card, the updated information is stored on the smart card, and also may be stored in the kiosk database. When and if communication is established between the offline kiosk and the central computer, any use of the kiosk is transmitted to the central computer for processing and updating the central computer database. It is also possible for other requests to be made at an offline kiosk and transmitted to the central computer for processing and reporting to the requestor at a later date at the same or another kiosk. Such requests can be for benefits, future employment opportunities, or any other of the employment functions supported in the system.

The kiosk may be one that is always offline. In this case, the smart card is updated and will not allow a withdrawal beyond the value on the smart card. If and when the smart card is inserted into a kiosk that is connected to the central computer, the transaction history stored on the smart card updates the central computer database. Since withdrawals cannot be made without a smart card, a dishonest employee cannot request cash without it. If a smart card is lost, value cannot be retrieved until all kiosks are serviced and the transaction history is downloaded into a transport database, and then uploaded into the central database to confirm all transaction requests are valid.

The employment support services system described herein provides abundant flexibility, configurability, and easy use for all portions of the system. Those persons skilled in the art will appreciate the many ways the ESS system can be manipulated and utilized to benefit an employment environment. The descriptions of the ESS system are intended to be exemplary and illustrative, and not limiting.

Claims:

1. An employment services system, comprising:
a central computer for providing coordinated employment functions;
a kiosk for providing a remote link to said central computer; and
an interconnection between said central computer and said kiosk providing communication between said central computer and said kiosk; wherein
said coordinated employment functions include identifying a particular employee using said kiosk, notifying said employee of an available job, relaying said employee's acceptance of said job from said kiosk to said central computer, tracking credit for work done by said employee for said job, and providing pay for said credit.

2. The system of claim 1, wherein said providing pay for said credit further comprises:
assessing deductions from said credit; and
providing partial or full cash payment for said credit after said deductions are assessed.

3. The system of claim 2, wherein
said cash payment is provided to said employee at said kiosk.

4. The system of claim 1, further comprising:
identification means for verifying user identification.

5. The system of claim 3, wherein
said identification means is one of a smart card, a magnetic strip card, and a biometric reader.

6. The system of claim 4, wherein
said smart card stores said information related to said employment functions.

7. The system of claim 4, wherein
said identification means is a combination of one of a smart card and a magnetic strip card, and a biometric reader.

8. The system of claim 1, further comprising,
a client computer remotely located from said central computer and connected to said central computer by said interconnection allowing communication between said central computer and said client computer.

9. The system of claim 8, wherein
said interconnection also provides communication between said client computer and said kiosk.

10. An employment services system, comprising:
a central computer for providing coordinated employment functions;
a kiosk for providing a remote link to said central computer; and
an interconnection between said central computer and said kiosk providing communication between said central computer and said kiosk; wherein
said coordinated employment functions include taking an application for employment, performing a screening for said employment, and identifying employment opportunities.

11. The system of claim 10, wherein
Said coordinated employment functions also include advertising available employment opportunities.

12. The system of claim 10, further comprising:
identification means for verifying user identification.

13. The system of claim 12, wherein

said identification means is one of a smart card, a magnetic strip card, and a biometric reader.

14. The system of claim 13, wherein
said smart card stores said information related to said employment functions.

15. The system of claim 12, wherein
said identification means is a combination of one of a smart card and a magnetic strip card, and a biometric reader.

16. The system of claim 10, further comprising,
a client computer remotely located from said central computer and connected to said central computer by said interconnection allowing communication between said central computer and said client computer.

17. The system of claim 16, wherein
said interconnection also provides communication between said client computer and said kiosk.

18. An employment services system, comprising:
a central computer for providing coordinated employment functions;
a kiosk for providing a remote link to said central computer; and
an interconnection between said central computer and said kiosk providing communication between said central computer and said kiosk; wherein
said coordinated employment functions include identifying a particular employee using said kiosk, receiving an inquiry from said employee regarding benefits, and responding to said inquiry.

19. An employment services system, comprising:
a central computer for providing coordinated employment functions;

a kiosk for providing a remote link to said central computer; and
an interconnection between said central computer and said kiosk providing communication between said central computer and said kiosk; wherein
said coordinated employment functions include identifying a particular employee using said kiosk thereby allowing communication between said employee and a labor hall.

20. The employment services system of claim 19, wherein
said coordinated employment functions also allow communication between said employee and an employer.

21. The employment services system of claim 19, wherein
said coordinated employment functions also allow communication between said employee and other employees.

22. The employment services system of claim 19, wherein
said coordinated employment functions also allow communication between said employee and outside businesses.

23. The employment services system of claim 22, wherein
said outside business is a financial institution.

24. An employment services system, comprising:
a central computer for providing coordinated employment functions;
a client computer for providing a remote link to said central computer; and
an interconnection between said central computer and said client computer providing communication between said central computer and said client computer; wherein
said coordinated employment functions include identifying a particular job and requesting an employee for said job via said client computer.

25. The employment services system of claim 24, further comprising:
a kiosk for providing a remote link to said central computer; wherein said interconnection also connects said central computer to said kiosk to provide communication to said system.

26. The employment services system of claim 25, wherein
said employee is notified of said request via said kiosk.

27. An employment services system, comprising:
a kiosk for providing employment functions;
a smart card; and
a client computer for storing value of pay to an employee and for storing identification information of said employee on said smart card; wherein
said employment functions include inserting said smart card into said kiosk, verifying said employee identification, and retrieving cash from said kiosk for said value of pay stored on said smart card.

28. The employment services system of claim 27, further comprising:
a central computer for providing coordination of said employment functions; and
an interconnection between said central computer and said kiosk providing communication between said central computer and said kiosk.

29. The employment services system of claim 28, wherein
said interconnection is also between said central computer and said client computer, wherein
said central computer receives said pay value to said employee from said client computer via said interconnection and stores said pay value.

30. The employment services system of claim 29, wherein

said central computer receives a request from said kiosk to receive said cash,

said central computer verifies said employee identification, and

said central computer verifies said pay value on said smart card is valid, updates said pay value in said database if different and authorized said cash payment.

31. The employment services system of claim 27, wherein said kiosk updates the value of said pay on said smart card.

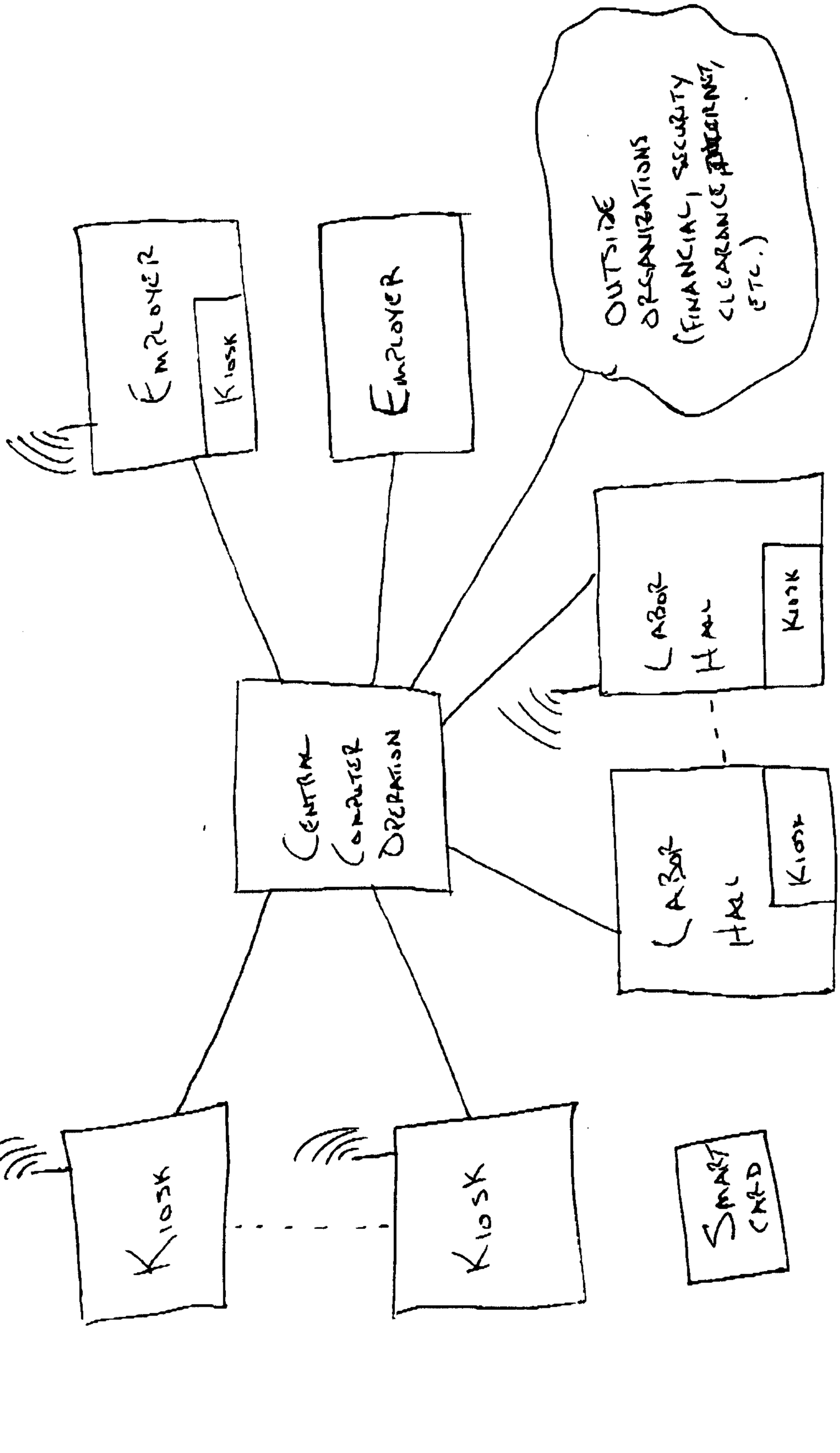

EMPLOYER
KIOSK
EMPLOYER
OUTSIDE ORGANIZATIONS (FINANCIAL SECURITY CLEARANCE GOVERNMENT ETC.)
CENTRAL COMPUTER OPERATION
LABOR HALL
KIOSK
LABOR HALL
KIOSK
KIOSK
KIOSK
SMART CARD

FIGURE 1

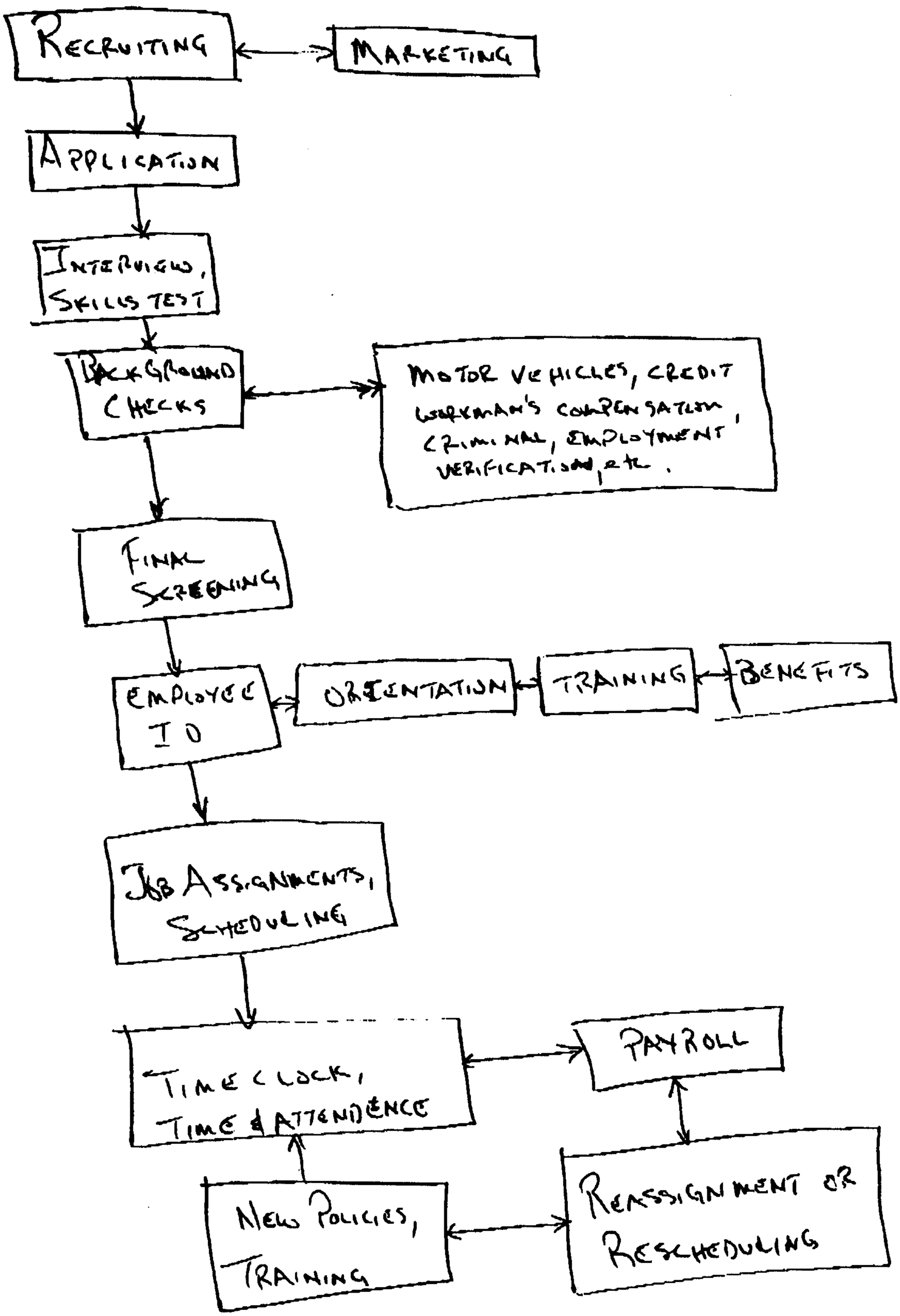

RECRUITING
MARKETING
APPLICATION
INTERVIEW, SKILLS TEST
BACKGROUND CHECKS
MOTOR VEHICLES, CREDIT WORKMAN'S COMPENSATION, CRIMINAL, EMPLOYMENT VERIFICATION, etc.
FINAL SCREENING
EMPLOYEE ID
ORIENTATION
TRAINING
BENEFITS
JOB ASSIGNMENTS, SCHEDULING
TIME CLOCK, TIME & ATTENDENCE
PAYROLL
NEW POLICIES, TRAINING
REASSIGNMENT OR RESCHEDULING

FIGURE 2

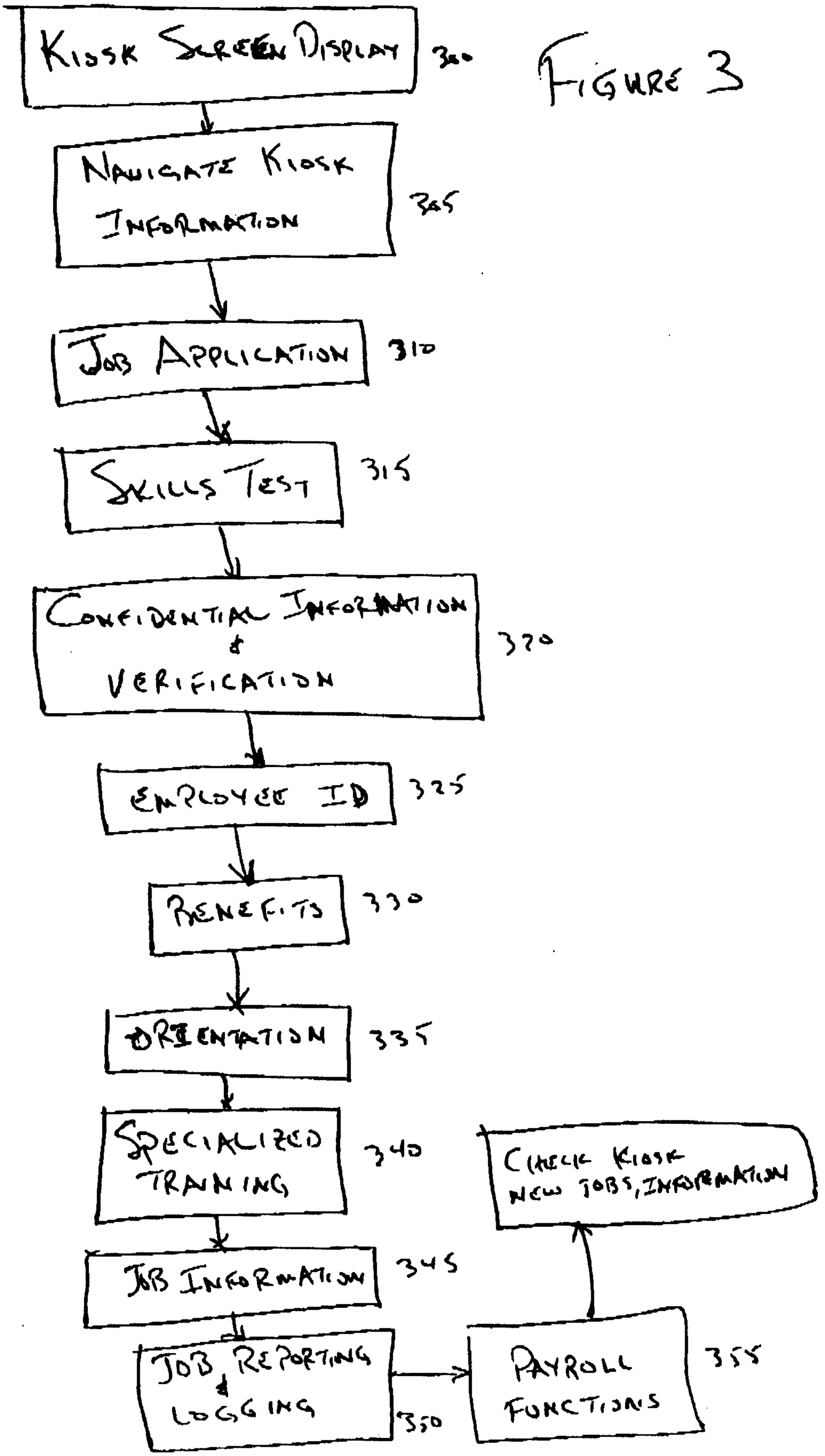
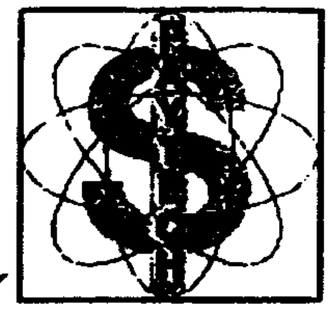

KIOSK SCREEN DISPLAY
300
NAVIGATE KIOSK INFORMATION
305
JOB APPLICATION
310
SKILLS TEST
315
CONFIDENTIAL INFORMATION & VERIFICATION
320
EMPLOYEE ID
325
BENEFITS
330
ORIENTATION
335
SPECIALIZED TRAINING
340
JOB INFORMATION
345
JOB REPORTING & LOGGING
350
PAYROLL FUNCTIONS
355
CHECK KIOSK NEW JOBS, INFORMATION

FIGURE 3

Welcome to ~~Paytech~~ Employer



We are glad you chose ~~Paytech~~ Employer. We want to make this as easy as possible.
The first thing to know is that
~~TOTAL STAFFING~~ Employer HAS NO KEY OR WAY OF ENTERING THE MACHINE.
So if you have a problem please ask an administrator to call for assistance.
It is easy to use this machine, for step by step instructions **Touch Here**

Fig 4

CA 02306520 2000-04-25

Are you looking for work?

[redacted]

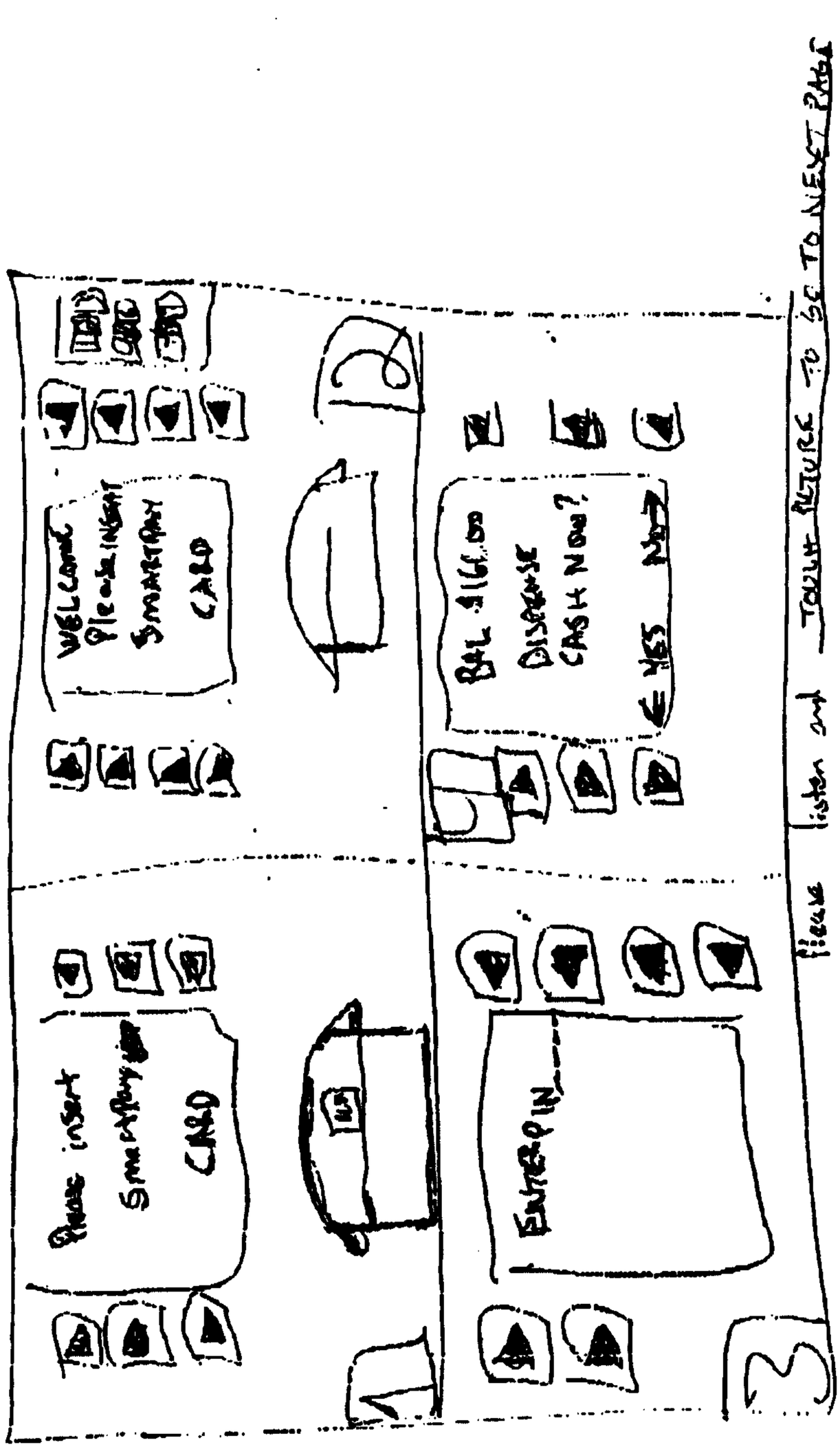
Do you need to hire employees for your company?

[redacted]

CA 02306520 2000-04-25

Fig 5

FIG 6



(AUDIO EXPLANATION: INSERTION OF CARD TRIGGERS DISPLAY)

"WHAT TO DO IF ELECTRONIC DEVICE / SMARTPHONE / CARD"

HOW TO ENTER PIN, AND BALANCE IS SHOWN.

ALSO LEADS TO NEXT PAGE "YES" OR "NO"

BUTTON TO RELEASE CARD.

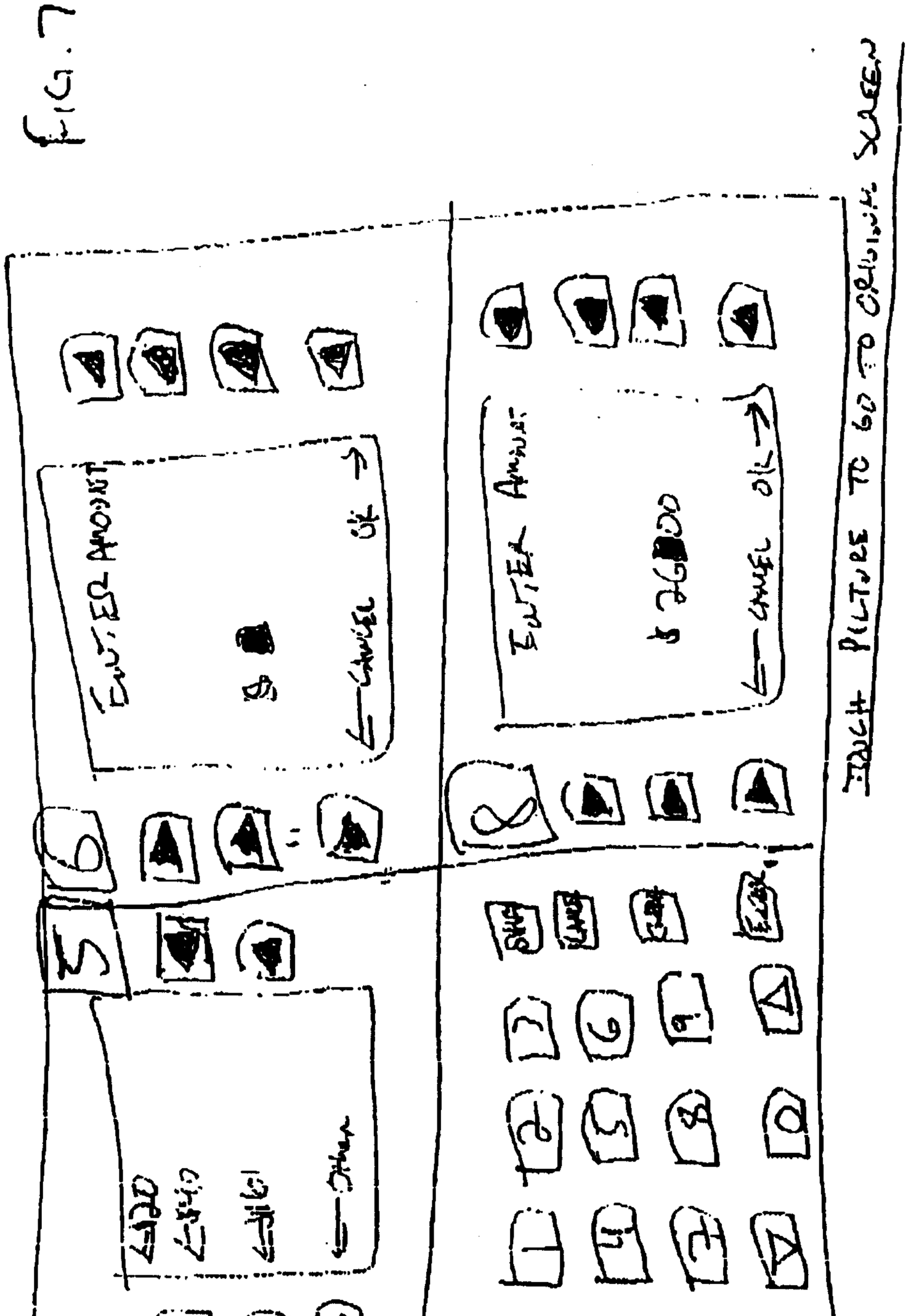

ENTER AMOUNT
CANCEL OK
ENTER AMOUNT
CANCEL OK
(AUDIO EXPLAINS: HOW TO CHOOSE AMOUNT TO DISPENSE FROM MENU LIST, HOW TO USE KEYPAD, HOW TO ENTER A DIFFERENT AMOUNT, AND TO RECEIVE CASH AND DEBIT CARD AND KEEP RECEIPT.)

FIG. 7

1. Personal Information

Name

Street Apt. No.

City State Florida Zip

Home Phone Message Phone

Do you have a driver's license? Yes No License# State Florida

How did you hear about Tandem? Newspaper ad Job flier or poster
Agency or counselor Friend or relative Tandem Employee

Have you ever been convicted or pled nolo contendere (no contest) to a crime? Yes No
[NOTE: A felony conviction will not necessarily disqualify you for work.]

[redacted]

Fig 8

Welcome to Total Staffing:

TO SKIP TO PAY INSTRUCTIONS PRESS THE PAYTECH BUTTON BELOW

- For information and directions on use, press the blue instructions button to the right.
- For employee policies, benefits and instructions, press the green button to the right.
- For an application for employment, press the red button to the right.
- For a customer application or an order, press the dark gray button to the right.
- For current job listings, press the yellow button to the right.

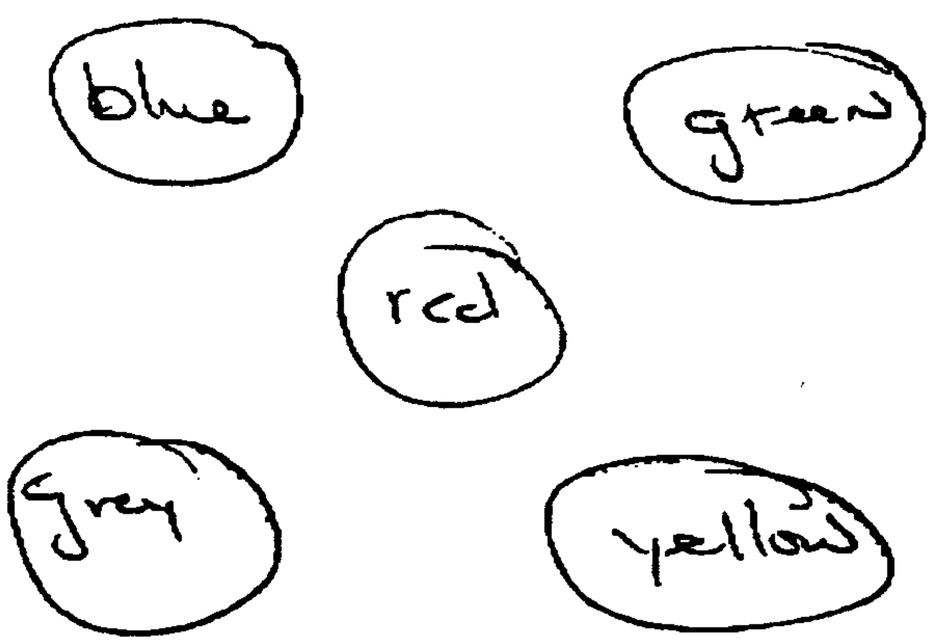


Fig 9

CA 02306520 2000-04-25

Staffing Firm

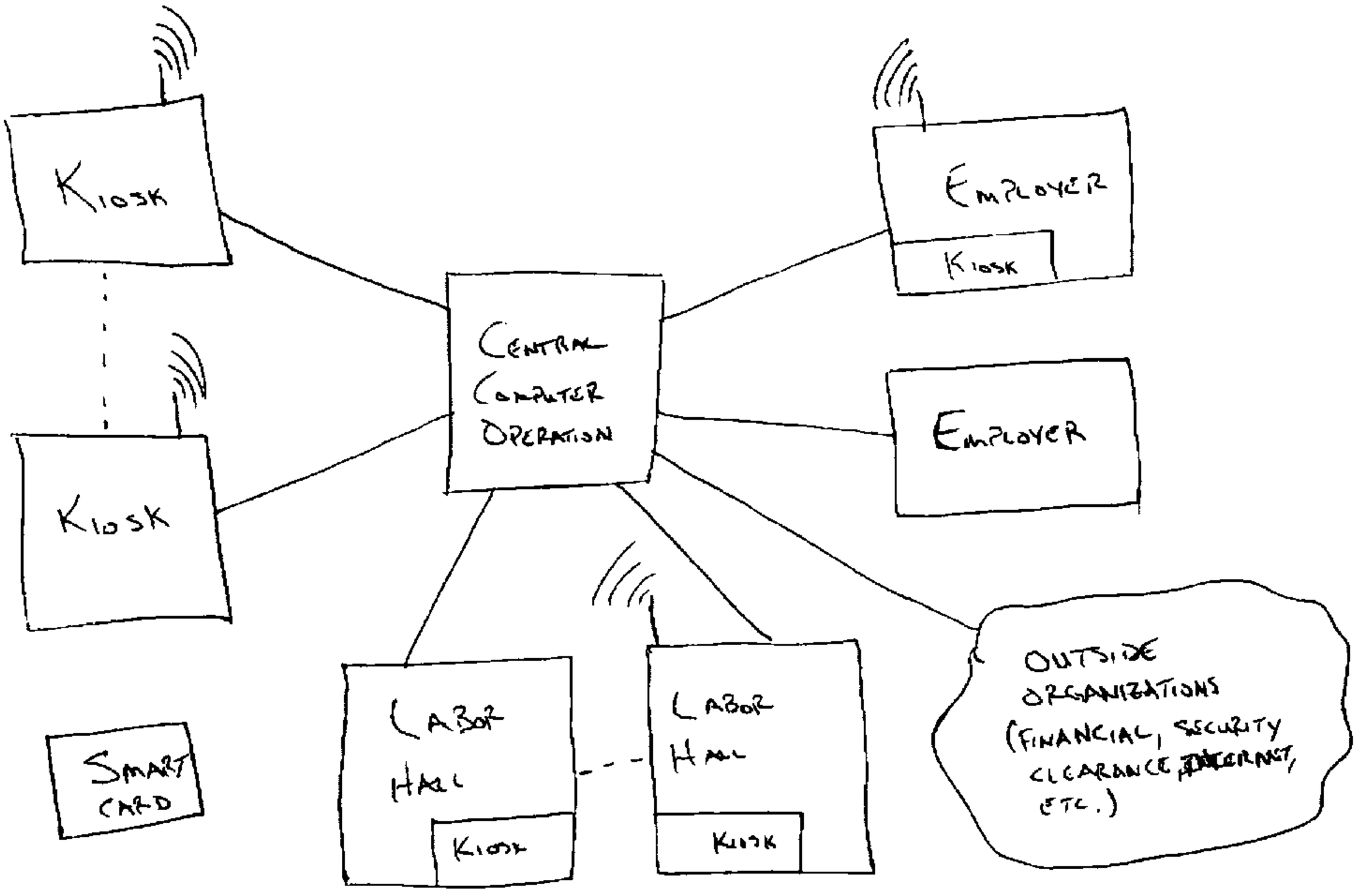
Job Board

Electricians, Carpenters + Other Skills We are always looking for electricians, carpenters and other skilled employees.If you have any skills or trade experience please put it on your application and tell the dispatcher your experience.This will help you to get higher paying jobs. Informing the dispatcher helps them to fill the skilled jobs with the people who have the most exerience.

To see a list of todays openings press this button.

Fig 10

CA 02306520 2000-04-25


KIOSK
KIOSK
SMART CARD
CENTRAL COMPUTER OPERATION
EMPLOYER
KIOSK
EMPLOYER
LABOR HALL
KIOSK
LABOR HALL
KIOSK
OUTSIDE ORGANIZATIONS (FINANCIAL, SECURITY CLEARANCE, ETC.)