

# TELEform® Elite - Enterprise Edition

## High Volume Forms Processing

### WORKS AT PRODUCTION LEVELS

For most organizations, uneven workloads, complex approval processes and diverse document types require the involvement of multiple people in the data entry process. The ability to efficiently build and manage a dynamic processing environment determines the quality and quantity of data that an organization can capture.

TELEform Elite-Enterprise Edition™ is a client/server forms processing solution that includes the world's most accurate recognition technology. TELEform streamlines the collection of data from forms, helping organizations capture the information that they need.

TELEform interprets hand print, machine print, check boxes and bar codes from paper forms gathered using fax machines and scanners. After automatically processing each form, TELEform highlights questionable entries for quick operator attention. Because TELEform processes the majority of the information, entry operators spend seconds verifying questionable data rather than minutes manually keying entire forms. Whether you have a two-user system or a production-level application, the time saved entering data quickly adds up to produce substantial cost savings.



- Automatically identifies forms without sorting, and corrects for skew, stretch and distortion on image
- Reads mark sense entries (OMR)
- Reads hand print entries (ICR)
- Reads barcodes
- Performs cross totals and complex validations
- Reads circled response fields
- Reads machine print entries (OCR)
- Verifies entries against databases and dictionaries
- Includes TrueAddress™ for address validation with street-level precision
- Removes lines and regenerates broken characters for improved accuracy

The Control Center, based on the Microsoft Management Console provides extensive information for workload balancing, workflow analysis, batch management, form optimization and system performance.



All TELEform activities can be managed from an administrator's workstation. TELEform Elite-Enterprise Edition provides the accuracy, scalability and centralized system management required to process hundreds, or hundreds of thousands of forms.

#### Benefits:

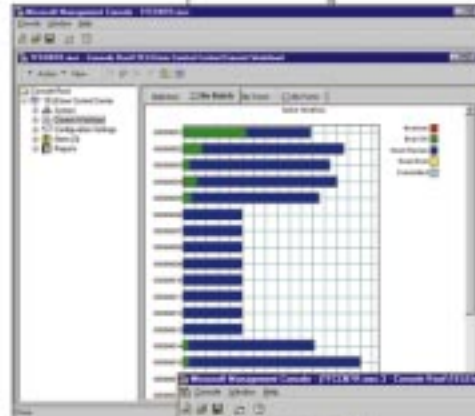
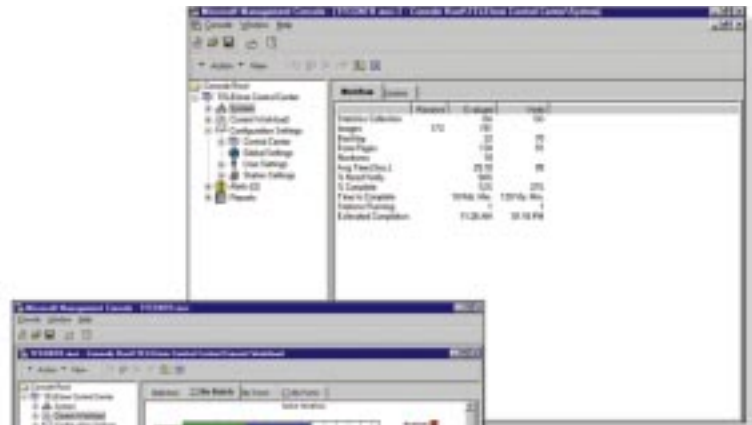
- Substantial reduction in costs and time associated with data entry
- Faster access to accurate business data
- Easy to implement, integrate and grow
- Measure and track individual operator productivity
- Support for existing information systems
- Rapid return on investment

## SYSTEM CONTROL AND ADMINISTRATION

TELEform Control Center gives system administrators the power to monitor and manage the data collection process. Administrators can report on and react to every activity, from form input and recognition to data output across a network. Based on the Microsoft Management Console (MMC), TELEform Control Center ensures that throughput goals are achieved by providing real-time reporting on individual, group and system-wide performance.

For analysis and decision-making, Control Center's SQL-based customizable queries can be utilized to report on trends that affect each business environment. As a single point of control for the entire forms processing system, Control Center allows system administrators to:

- View work in process and overall system performance
- View and monitor operator performance and throughput in real time
- Make changes to system-wide and operator/workstation settings
- Control the priority of work and escalate specific batches for immediate processing
- Maintain system security, assigning operator logins and passwords
- Configure alerts that will highlight specific throughput or processing issues for immediate attention
- Generate extensive reports on system and operator performance



TELEform Control Center provides real-time information on batch workflow, including the time necessary to evaluate and verify the current workload.

Work in process can be represented graphically, providing a comprehensive, current status of all batches.

| Process     | Batch | Status    | Time     |
|-------------|-------|-----------|----------|
| Form Flight | 1     | Completed | 10:18:00 |
| Form Flight | 2     | Completed | 10:18:00 |
| Form Flight | 3     | Completed | 10:18:00 |
| Form Flight | 4     | Completed | 10:18:00 |
| Form Flight | 5     | Completed | 10:18:00 |
| Form Flight | 6     | Completed | 10:18:00 |
| Form Flight | 7     | Completed | 10:18:00 |
| Form Flight | 8     | Completed | 10:18:00 |
| Form Flight | 9     | Completed | 10:18:00 |
| Form Flight | 10    | Completed | 10:18:00 |

| Operator    | Process   | Performance |
|-------------|-----------|-------------|
| Operator 1  | Process A | 100%        |
| Operator 2  | Process B | 95%         |
| Operator 3  | Process C | 90%         |
| Operator 4  | Process D | 85%         |
| Operator 5  | Process E | 80%         |
| Operator 6  | Process F | 75%         |
| Operator 7  | Process G | 70%         |
| Operator 8  | Process H | 65%         |
| Operator 9  | Process I | 60%         |
| Operator 10 | Process J | 55%         |

Administrators can manage and track the performance of individual forms as they are processed by any workstation.

Use various standard reports or generate custom reports to manage operator and system performance.

# TELEform® Elite - Enterprise Edition

## THE DATA COLLECTION SERVER

Enterprise Edition is designed for production level forms processing. Each of TELEform's core functions — form design, image capture, recognition and verification — can be distributed across the network and performed at any number of *Designer*, *Reader* and *Verifier* workstations. In addition to adding capacity, the redundancy of multiple workstations performing similar tasks contributes to overall system reliability. To manage the data capture environment, TELEform Control Center allows an administrator to monitor and control the flow of work within the system.

For reliable growth, Enterprise Edition operates on proven platforms, including Windows 95, 98, and NT workstation operating systems, and Windows NT and Novell servers. The system is fully scalable. As an organization's data collection needs grow, administrators can add *Designer*, *Reader* and *Verifier* workstations.

## CREATING COMPUTER READABLE FORMS

TELEform's *Designer* includes form design and field definition wizards that make it easy to lay out forms that are optimized for automation. TELEform can process four types of forms:

### • Traditional TELEform Forms

Four fixed cornerstones and a form ID code allow Traditional TELEform forms to be identified accurately, overcoming any skew and distortion introduced during scanning or fax transmissions.

### • VersiForms™

With the versatility to change and relocate reference and form identification marks, VersiForms offer the reliable interpretation of Traditional TELEform forms, while providing design flexibility for forms that are optimized for scanning.

### • Existing Forms

An organization's existing forms can be set up for recognition in two easy steps. Simply scan in a blank copy of a form and TELEform Elite will identify its distinguishing features for automatic form identification. Then band over each field and use TELEform's design wizards to quickly define the attributes of each field.

### • HTML Forms

By adding the TELEform Internet Solution to Enterprise Edition, any form can be easily converted into HTML format and posted to a web site.



**Traditional TELEform Form**  
Fixed cornerstones and form ID code make traditional TELEform forms ideal for fax-based applications.



**VersiForm**  
Versatile reference marks and form ID accommodate your aesthetic and functional requirements.



**Existing Forms**  
With TELEform Elite, you can collect data from your existing paper forms. Scan or fax in the original form and use TELEform's point and click interface to map fields for recognition.



**Design Wizard**  
Band around any area on a form and use TELEform's design wizards to define data collection properties.

## DATA COLLECTION GATEWAY

Managing a wide range of capture methodologies is a key factor to a production-level system's success. *TELEform* Elite-Enterprise Edition provides a Total Data Collection™ gateway that handles input from production scanners, fax servers, other applications and the Internet.

Delivering fail-safe reliability for production applications, Elite-Enterprise Edition offers sophisticated batch control from input through verification to data output. Batches can be reprioritized or routed to one of many workstations on the network at any time. From departmental to enterprise-level solutions, only *TELEform* Elite-Enterprise Edition provides such a flexible platform.

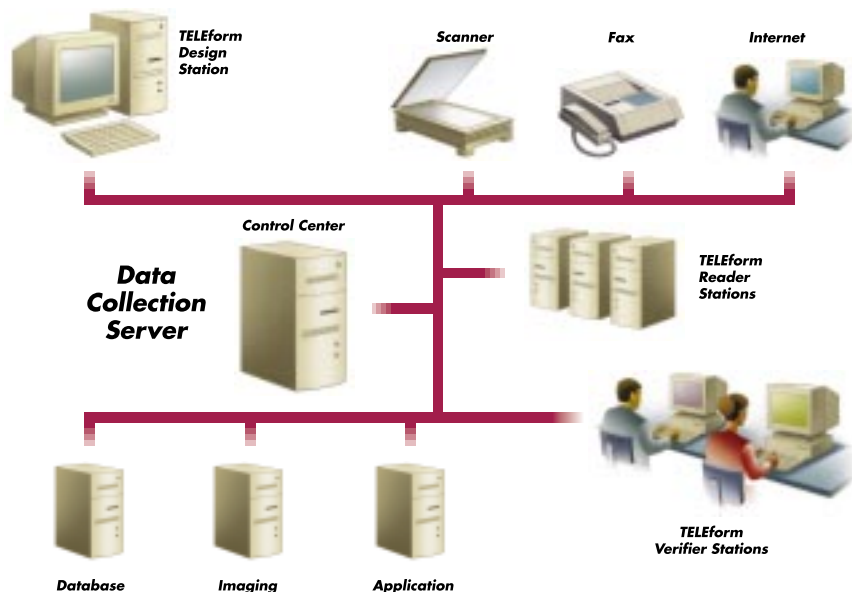
Each step of the way, *TELEform* Control Center provides administrators with detailed information on throughput and work in process. Based on this feedback, workstations can be reconfigured or added to the network, offering scalability without interrupting production.



## TRI-CR — UNMATCHED ACCURACY

Tri-CR® leverages the strengths of multiple recognition engines to produce unprecedented accuracy for hand print and machine print data. The software engines examine the characters. Tri-CR then analyzes the results, balancing the strengths of the individual engines, to determine the correct interpretation.

*TELEform* with Tri-CR consistently produces 200% to 300% improvement in hand print accuracy and up to 50% improvement in machine print accuracy over single engine programs.



## UNMATCHED RECOGNITION

*Reader* workstations operate around the clock to process hundreds of thousands of forms. Each *Reader* workstation utilizes Cardiff Software's industry-leading Tri-CR® recognition to read hand print (ICR), machine print (OCR) bar codes and mark sense (OMR) with unequaled precision.

To avoid manual sorting and routing of incoming documents, *TELEform Reader* workstations automatically identify and process incoming forms; drop out ink forms and forms with attachments are instantly recognized. *TELEform's* automatic form identification process handles multi-page forms, identifying out of sequence and missing pages. Even the most difficult forms with shifting data and varying image quality are accurately identified using dynamic pre-processing.

The software improves the quality of faxed and scanned images by performing despeckle, half-tone removal, character smoothing and line thickening procedures. When used in conjunction with *TELEform* Internet Solution, *TELEform Reader* can also process data received from HTML forms on a web site.

## HIGH THROUGHPUT VERIFICATION

Forms that contain questionable entries or that do not pass user-defined business rules are routed to *Verifier* workstations for attention. Three distinct modes displaying characters, fields and forms enable quick data correction. User-defined validations increase data integrity. Point and click validations include:

- Database validations
- Dictionary look ups
- Numeric range tests
- Date, currency and character-specific formatting
- 'Always review' and 'Entry required' field designations
- TrueAddress™ for U.S. address validation with street-level precision

*TELEform* includes a fully integrated Visual Basic programming language called BasicScript™ for custom validation requirements. BasicScript can be used to build arithmetic comparisons, financial calculations, calls to external applications, skip and fill logic, and other business logic routines.

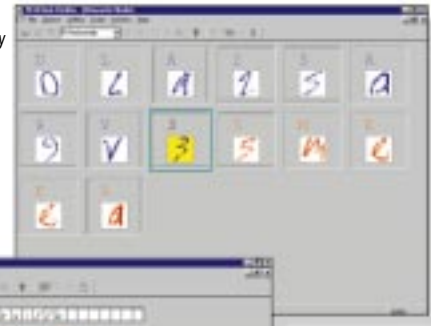
Since only the characters requiring human attention are presented, operators can process five times more data. Even greater productivity gains are realized when individual workstations are configured to match the strengths of each operator; *TELEform Verifier* facilitates these gains by allowing administrators to designate which operators process characters, fields in context, or entire forms. Unstructured data fields (for example, comments on a survey) can be routed to operators for "key from image" correction. To handle peak production, additional *Verifier* workstations can be added as needed.

One of Enterprise Edition's key productivity benefits lies in its verification workflow. Operators have the ability to route forms to supervisors for approval or to co-workers for assistance. Electronic notes can be appended to forms to clarify issues among the team and to maintain a log of processing decisions. Supervisors can also monitor performance with detailed reports generated in Control Center. With this information, they can manage operator throughput and assign work to maximize results.

## OUTPUT ACROSS THE ENTERPRISE

Once recognition and verification are complete, *TELEform* automatically exports information to a wide range of databases and spreadsheets as well as any user-installed ODBC format. The data can be appended as it is received or batch processed to a designated data file. After the data is exported, the form images can be deleted, or stored and indexed to leading document management systems. From clinical trials to order entry, Enterprise Edition meets the most demanding database connectivity requirements for mission critical applications.

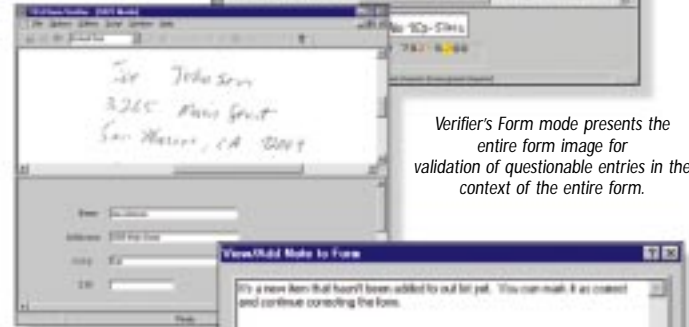
*TELEform's* multi-mode *Verifier* allows you to quickly check any questionable entries. Character mode presents a stream of questionable characters for rapid correction.



If an entry cannot be verified in Character mode, send it to Field mode, which displays questionable characters in context.



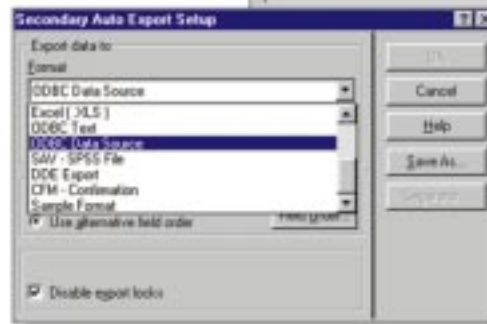
*Verifier's* Form mode presents the entire form image for validation of questionable entries in the context of the entire form.



*TELEform Elite's* Selective Key From Image (SKFI) feature enables you to quickly enter unstructured information during the verification process.



*TELEform Notes* can be attached to forms for streamlined communications between operators.



*TELEform* directly exports data to the ODBC compliant database or spreadsheet that you choose.

## FEATURES:

### System Management

Microsoft Management Console-based Control Center  
SQL-based data manager  
Graphical system display  
Centralized system configuration  
Operator performance monitoring  
Real-time productivity reporting  
Performance Alerts  
Dial-up License Manager

### Design

Traditional TELEform forms  
VersiForms  
Existing forms  
HTML forms (with TELEform Internet solution)  
Spell check  
Design Wizards  
Variable field locations  
Object library

### Image Enhancement

Dynamic image preprocessing  
Deskew/Despeckle  
Half tone removal  
Line removal/reconstruction  
Character regeneration  
Character smoothing/thickening

### Image Capture

Microsoft Fax  
Fax Servers  
Scanners  
TIFF, PCX, DCX, image directories  
Auto batch creation  
Batch scanning controls

### Recognition

Tri-CR recognition technology  
Hand print (ICR)  
Machine print (OCR):  
Omnifont, dot matrix, OCR A, OCR B, Farrington  
Mark sense (OMR):  
Check marks, bubbles, circle responses, underlines  
Bar codes:  
PDF-417, Code 39, 93, 128,  
Interleaved 2/5, UPC, EAN, Codabar  
Symmetrical Multiprocessor (SMP) support

### Verification

Multi-mode correction:  
Character, field, form views  
Selective Key From Image  
Field specific confidence levels  
Optimize display for each user  
Statistical performance reports

### Verification workflow:

Supervisor approval  
Co-worker routing

### TELEform Notes

### Validation

Contextual checking  
User-defined dictionary look-ups  
ODBC database comparisons  
Always review/entry required  
Date, currency and character specific formatting  
Custom business rules with BasicScript™  
U.S. Address validations with TrueAddress™

### Data Export

Index images for document management solution  
Dual database export  
Automatic date and time stamping  
ASCII, Access, Excel, FoxPro, dBase, Oracle, Paradox,  
SQL Server, SPSS  
User installed ODBC-compliant databases  
Custom export options including:  
AS400/Mainframe Systems  
High speed form merge

### System

Year 2000 Compliant

## System Requirements:

- **Network Environment**
  - NetWare 3.12/4.11
  - Windows NT 4.0
- **Work Station Requirements**
  - Intel Pentium-based PC  
(Pentium 133 or higher recommended)
  - Windows 95, Windows 98 or  
Windows NT 4.0
  - 64 MB of RAM or more
  - 150 MB of available HD space.
  - VGA color monitor
  - CD-ROM Drive
  - Compatible scanner or fax server
- **Training**
  - TELEform 101, 201, 301  
workshop courses recommended

## ABOUT CARDIFF SOFTWARE

Cardiff Software is the global leader in forms processing software. By providing a total data collection solution for fax, scan and Internet (HTML) forms, Cardiff Software delivers proven solutions that increase productivity, lower operating costs and reduce data turnaround time. The company offers comprehensive consulting, training and support to meet customers' business requirements. Cardiff Software's TELEform product line is available worldwide through Cardiff Software's North American and European offices and from a network of certified resellers and system integrators.

# Cardiff Software™

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