AMIR Fast Track E-Government Version 1 (AFTEV1)

Project Requirement Document

20 September, 2000

1. Scope.

1.1 Identification

This activity shall be identified as the AMIR Fast Track E-Government Version 1 (AFTEV1) project. AFTEV1 represents a pilot activity to provide the Government of Jordan (GOJ) with a modern, structured, automated computing and communications environment for business and citizens to interface with government information and services.

1.2 AFTEV1 Overview

E- Government is being adopted by Governments worldwide as a means of improving their services to business and citizens, promoting economic and social development and improving the effectiveness and efficiency of Government operations. For Jordan, e-Government represents an opportunity to make a major contribution to economic development through assisting Jordanian businesses to reduce their operating cost in dealing with Government and to have ready and immediate access to Government information, which will assist their development. Similarly, the provisions of e-services to citizens represents an opportunity to reduce the complexity of dealing with Government administration and bringing citizens and government closer together, making Government more transparent and accessible to business and citizens. Additionally, E-Government will allow Government practitioners to share, and access, information across cross-functional organizations. Establishing e-services represents a major shift in the role of Government towards a "client focused" approach to the delivery of services rather than Government as a collector of information solely for its own purposes.

1.3 Reference Documents

The capabilities provided via the AFTEV1 project described within this document represent efforts to implement a pilot activity supporting e-government initiatives addressed within the following:

- **e-Government Taskforce of the Economic Consultative Committee (ECC)** draft report "***Launching e-Government in Jordan: A Proposed Approach"***
- **AMIR** final report ***"Investor Road Map-Company Registration"*** dated May 1999
- **AMIR** draft report ***"Electronic Government"*** dated August 2000
- ***"The REACH Initiative: Launching Jordan's Software and IT Services Industry"*** dated March 2000

1.4 "Fast Track" Pilot Projects

The two (2) pilot projects addressed within this requirements document, Business Registration Service and Telecommunications Licensing and Regulation Service are functionally different. However, they will be addressed as composing an initial effort to implement government e-services in a systematic and coordinated approach. The implementation of these early "fast track" capabilities is designed to provide a structure of communications, hardware and software that affords an "open standard" environment in which future e-government functions, applications and services may be developed and implemented. This will mitigate the need to develop new environments for additional e-government capabilities currently under consideration.

1.4.1 Electronic Business Registration

This pilot project will web-enable the Companies Registrar database to allow online registration of new companies, and create linkages to other related government databases to allow data to be replicated from the Companies Registrar on a regular basis. This process may include upgrading the current database and/or establishing an additional RDBMS tier to handle web transactions and replication of new registration data to other government databases as specified. A document management system will be integrated with this process. General system-level specifications are covered in section 2.1 below.

1.4.2 Telecommunications Licensing and Regulation

The Telecommunications Regulatory Commission maintains a web site which currently presents a variety of useful information for telecom operators and the public on telecommunication legislation, licensed equipment, operators, etc. The requirements addressed within this document are targeted to provide assistance to the TRC in improving existing online interfaces to its databases and to potentially add an online operator licensing function. General system-level specifications are covered in section 2.1 below.

Figure 1-1 AFTEV1 Overview Diagram depicts the relationships of the two pilots and their linkage to other government/business entities and citizens.

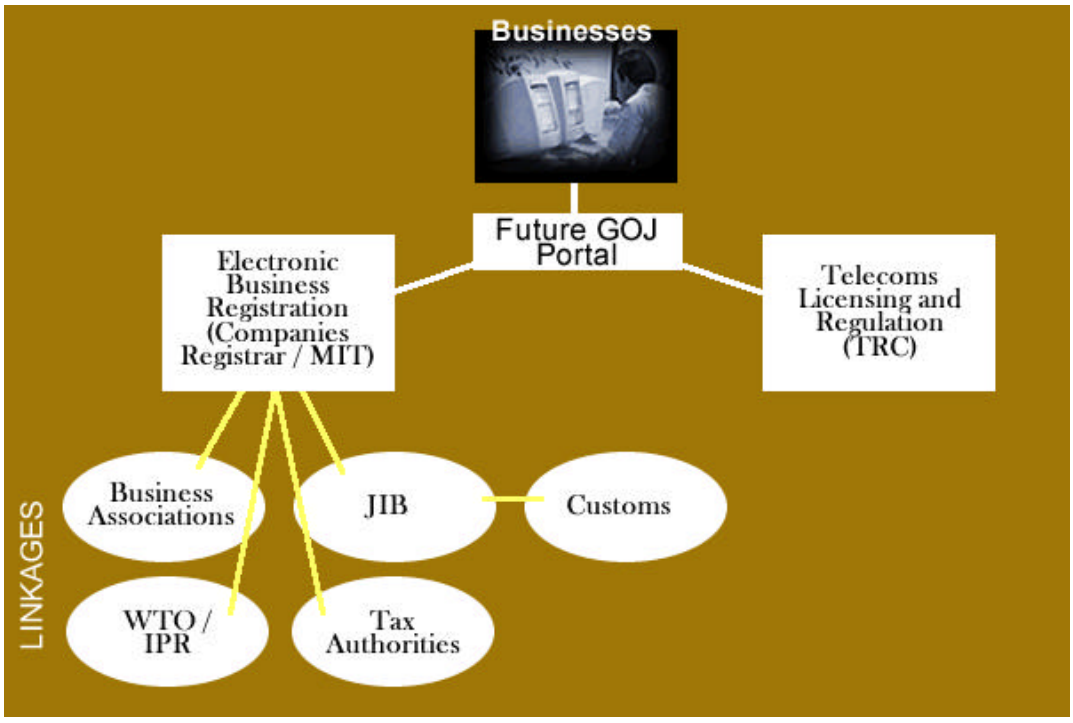

Figure 1-1 AFTEV1 Overview Diagram

2. Requirements

2.1 System Level

2.1.1 Application architecture. The contractor shall define and implement a client/server architecture that will use both the Internet and Ethernet networks for client communications. To the maximum extent possible, communications should be handled via the TCP/IP protocol suite. The server side of this architecture must include an enterprise-class RDBMS which supports open standards including ODBC and XML. The contractor will implement a thin client, browser-based approach for reading/writing data to the server across the Internet or Ethernet connections. The contractor will also define an appropriate replication method for updating datasets at several "subscriber" servers at other sites. The architecture of the system will comply with other system-level requirements enumerated below.

2.1.2 Hardware

2.1.2.1 System Performance. The contractor shall define a methodology for monitoring system performance (for example, CPU resource management, disk space management).

2.1.2.2 I/O Subsystem. The contractor shall specify an input/output subsystem for data servers that balances performance with automatic recoverability in case of the failure of a storage device. (For example, maintaining transaction logs on a RAID1 array and data storage on a RAID0 array).

2.1.2.3 Servers. The contractor shall specify the number, type, size, capacity, processor characteristics, memory, input/output devices, auxiliary storage, and other key features of the servers required to deploy the application. USAID/AMIR will handle procurement of the specified hardware.

2.1.2.4 Ethernet Clients. The contractor shall describe the number, type, size, capacity, processor characteristics, memory, input/output devices, auxiliary storage, and communications/network equipment for any required non-Internet clients.

2.1.3 Software. The contractor shall specify the operating systems, database management system, web application server, communication/network software, utility software, etc., required to deploy the application. In doing so, the contractor should identify options which represent the best value for the Government of Jordan.

2.1.3.1 Database Management System. The contractor shall describe and define the DBMS to be employed and the following:

- Table structures (must be based to a large extent on databases already in place at the Companies Registrar and TRC)
- Use of stored procedures and/or remote procedure calls to automate operations and business rules
- Programming interface or application server software tiers to be used to interface the DBMS to web and Ethernet clients
- Replication methodology to be used in sharing data among key databases (business registration data)

2.1.3.2 Error Handling. The application will support error handling and logging.

2.1.3.3 Transactions. The application and RDBMS designed/specified by the contractor should ensure to the extent possible that data transactions ensure atomicity, consistency, isolation, and durability.

2.1.3.4 Programming. The contractor shall specify the programming interface to be used for web-database connectivity.

2.1.4 Standards. The contractor shall specify communications and database interface standards which represent best technology practices and open standards, including TCP/IP, ODBC and XML.

2.1.5 Data Backup and Recovery. The contractor shall define and implement a methodology for performing data backup and recovery that minimizes the potential for data loss in case of catastrophic server failure.

2.1.6 Security and Privacy. The contractor shall define a methodology for ensuring privacy and security, including the privacy of data once in place and encryption of data during transmission. The contractor shall identify and define firewall requirements, and will work with USAID/AMIR staff to implement firewall protection between web applications and enterprise systems / LANs of hosting organizations.

2.1.7 Availability. The contractor shall design the application and supporting infrastructure to provide maximum availability on a 24-hour, 7-day per week basis, with failover capability.

2.1.8 Communications. The contractor shall define the communications requirements concerning geographical locations to be linked, configuration and network topology, transmission techniques, data transfer rates, gateways, required system use times, type and volume of data to be transmitted/received, peak volumes of data, and diagnostics.

2.2 Business Registration

2.2.1 Description

The current manual process of company registration is contained within the AMIR document ***"Investor Road Map-Company Registration"*** dated May 1999. This manual process shall be used in the determination of an automated process. All required forms, procedures, legal considerations shall be incorporated within the framework of the automated process. Licensing and security checks shall be de-coupled from the current process unless there is a regulatory requirement for licensing prior to registration (for example, banking and construction businesses). Figure 1-2 Companies Registrar Overview Diagram provides an overview of the relationships and linkage to other government and business entities.

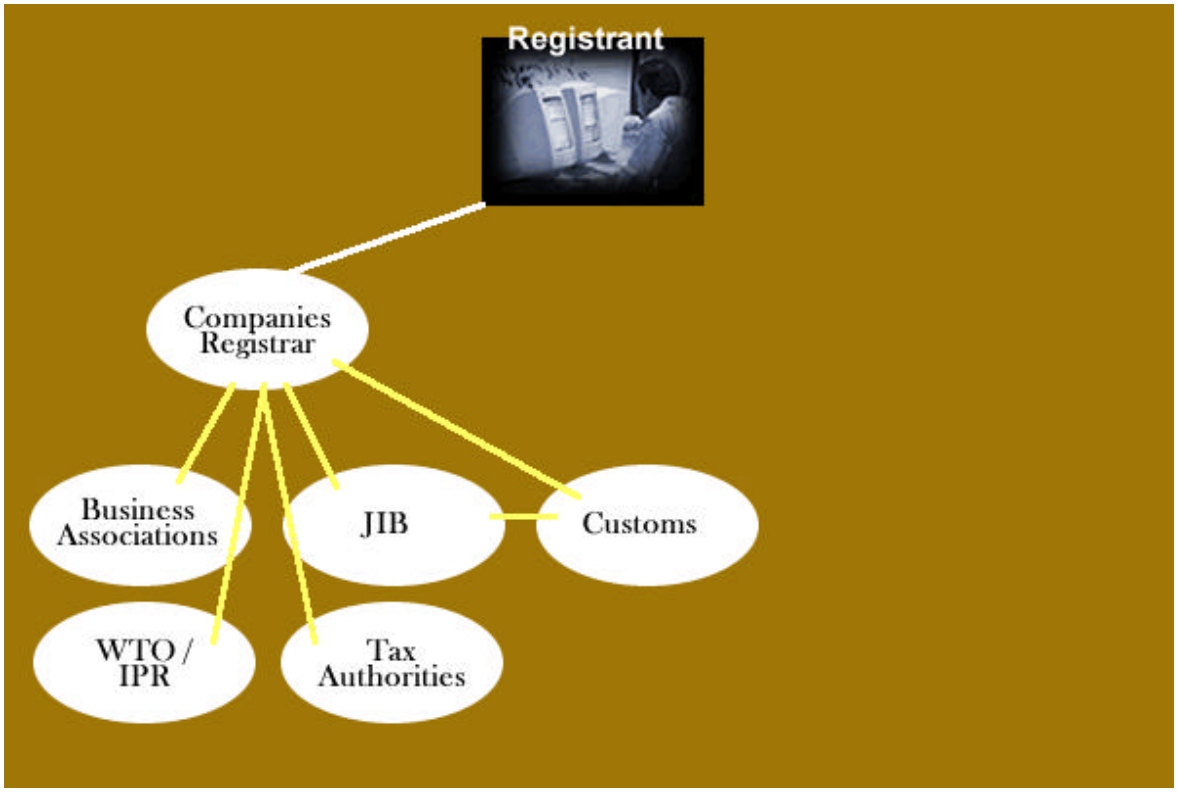

Figure 1-2 Companies Registrar Overview Diagram

2.2.2 Business Registration Service. The ***Business Registration Service*** shall enable businesses to interact with government through a single portal on three levels of functionality.

2.2.2.1 Information. The contractor shall develop a web application that provides or accesses the following static information:

- Information on legal options for establishing a business entity (limited liability corporation, sole proprietorship, etc.)
- Simplified, general information on types of permits and licenses required for businesses operating in different economic sectors
- A step-by-step guide to completing transactions, drawn from the "Investor Roadmap" documents, including where offices, forms, and other information can be found
- Template business plans and startup resources for small businesses, micro-enterprises, and entrepreneurs
- Description of fees required for registration and common permits
- Description of how to apply for patents, copyrights, and trademarks

Note: The contractor will not be responsible for developing all of this information, but rather for building an interface which centralizes access to this information.

2.2.2.2 Communications. The contractor shall develop and or implement software that provides the following communications:

- Automatic forwarding of basic company information from MIT to the Jordan Investment Board when a registering company's profile indicates that it is eligible for tax or customs relief

- Automatic forwarding of basic company information from MIT to the appropriate tax authorities database(s)

- Automatic forwarding of basic data on newly registering companies from the Companies Registrar to mandatory-membership associations such as the Amman Chamber of Commerce and the Amman Chamber of Industry and to other voluntary member business organizations.

- Access for Customs and JIB to a shared database of customs exemption authorizations.

2.2.2.3 Transactions. The contractor shall develop and or implement software that provides the following transactions:

- Completing and submitting the company registration form on-line, with an automated response indicating required support documentation.

- Checking the status of applications for company registration, patents, or trademarks on-line.

2.2.2.4 Document Management System. The contractor shall implement a document imaging, storage and retrieval system that shall be integrated with the business registration capability to be developed. The contractor shall provide user training.

2.2.2.5 Interfaces. Figure 1-3 "Business Registration Service Process" depicts the projected interface and data flow. The contractor shall develop detailed interface diagrams for this automated interface and the data replication process.

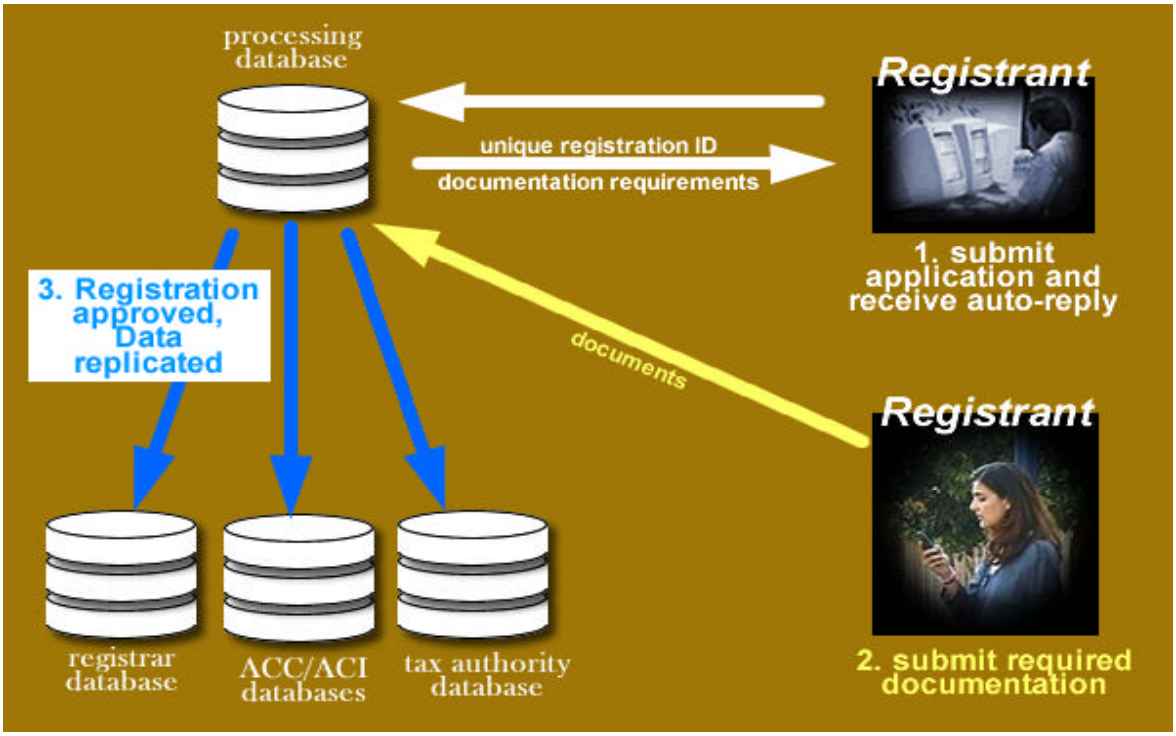

Figure 1-3 Business Registration Service Process

2.2.3 Business Rules and Application Logic

Business rules and application logic must, at a minimum, ensure the following:

- The application should provide validation of form data
- The application should ensure completeness of data
- The application should cross-reference a table of licensing requirements to determine licenses which may be required of the applicant, and should report this information back to the applicant in response to the application submission
- The application should generate a unique registration ID for each applicant and report this to the applicant for use in tracking the status of his/her application

2.2.4 Stakeholders

The major stakeholders of this service will be:

- New businesses, which must register to operate legally in Jordan and which may be eligible for customs or income tax relief.
- Business associations, including the Amman Chamber of Commerce and the Amman Chamber of Industry.
- Public sector agencies, including the Companies Registrar (MIT), World Trade Organization Unit (MIT), Intellectual Property Rights Unit (MIT), and Jordan Investment Board (MIT).

2.2.5 Benefits to Customers and Service Providers
The following benefits will be achieved*:*

- Reduction in costs associated with registration and submission of forms for business registration – businesses, government, and associations.

- Reduction in errors and redundant data entry at the point of submission of registrations leading to reduction in time to complete transactions and greater accuracy of data. These improvements signify a reduction in cost and increased productivity of staff time – businesses, government, and associations.

- Consistency among company data sets maintained at different organizations for government and associations.

- Improved ability to identify businesses eligible for incentives, improving use of staff time and nurturing a more attractive investment environment for business and government.

2.3 **Telecommunications Licensing and Regulation**

2.3.1 Description. The Telecommunications Regulatory Commission maintains a web site which currently presents a variety of useful information for telecom operators and the public on telecommunication legislation, licensed equipment, operators, etc. This technical assistance contract will provide assistance to the TRC to improve existing online interfaces to its databases and to add an online operator licensing function.

2.3.2 The **Telecommunications Licensing and Regulation Service** shall enable businesses to interact with government through a single portal on three levels of functionality: information, communication, and transaction.

2.3.2.1 Information. The contractor shall develop a web application that provides or accesses the following information:

- Pending spectrum or operator license auctions or sales

- Public outreach information on Internet penetration, pricing of leased line and satellite connectivity, newly approved hardware, and other items of interest (drawn from information currently collected for TRC's ***Communicator*** monthly newsletter).

- Full-text indexed searchable digest of the telecommunications law and regulations.

- Digest of developments in the build-out of national telecommunications and internet infrastructure.

Note: These represent types of information currently maintained by TRC. It will be the contractor's responsibility to improve and centralize access to this information on the web.

2.3.1.2 Communication. The contractor shall develop and or implement software that provides the following communications:

- Facilitated mass-notification of licensed operators on proposed rule-making, regulatory changes, or intent to award a license

- Automated monthly reporting to the Ministry of Post and Communications on newly-granted licenses and regulatory actions taken

2.3.1.3 Transactions. The contractor shall develop and or implement software that provides the following transactions:

- Completing and submitting applications for Internet Service Provider or telecomm operator licenses on-line.

- Checking the status of pending applications on-line.

2.3.2 Business Rules.
Business rules and application logic must, at a minimum, ensure the following:

- The application should provide validation of form data

- The application should ensure completeness of data

- The application should generate a unique registration ID for each applicant and report this to the applicant for use in tracking the status of his/her application

2.3.3 Stakeholders
The major stakeholders of this service will be:

- **Businesses** involved in the mobile telecommunications or Internet service industries that must monitor availability and submit applications for available bandwidth or frequencies and who must stay abreast of regulatory developments.

- **Public sector agencies**, including the Telecommunications Regulatory Commission and the Ministry of Post and Communications.

2.3.4 Benefits to Customers and Service Providers
The following benefits will be achieved:

- Reduction in costs associated with registration and submission of forms for telecommunications operator licenses for both businesses and government.

- Reduction in errors and redundant data entry at the point of submission of registrations leading to reduction in time to complete transactions and greater accuracy of data. These improvements signify a reduction cost and improved productivity of staff time for both businesses and government.

- Simpler, more accurate processes for notifications on spectrum auctions, new licenses, and/or regulatory changes. Such processes will reduce the time spent on these activities by telecom operators and ISPs and will help ensure accountability and transparency on the part of government regulators for businesses and government.

2.4 User Requirements.

The following user requirements apply to the Electronic Business Registration system and the Telecommunications Licensing and Registration System:

- Users should be able to access all public information and complete transactions from a standard Internet browser with no additional plug-in or software requirements..
- Users should have the capability to complete forms in both Arabic and English.
- Users should receive confirmation any time a transaction is completed successfully, with a unique tracking number for that transaction.
- Users should be able to find the service or information they are seeking online by following no more than two hyperlinks (“two clicks”) from the home page of the hosting organization.
- Users should be able to access services attached to the GOJ portal 24 hours per day, 7 days a week.
- Navigation and content organization should be immediately clear to the user.
- Context-sensitive help should be available to users as they complete on-line transactions or forms.