DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

Request for Proposals for an Operational Test of an Electronic Payment System for Transportation and Other Applications

AGENCY: Federal Transit Administration (FTA), DOT. **ACTION:** Notice.

SUMMARY: The U.S. Department of Transportation (US DOT) announces a Request for Proposals from eligible applicants for an operational test of an electronic payment system for transit fare collection, parking payment, electronic toll collection and other applications. The US DOT is interested in identifying and evaluating issues associated with the establishment of partnerships between public transit service providers and other entities in the development and use of multipleapplication electronic payment systems. The Department is specifically interested in an operational test of a payment system that includes a variety of applications, but must at a minimum include transit fare collection, parking payment and electronic toll collection. **DATES:** Proposals shall be submitted by 4 P.M. EST on or before October 25, 1999.

ADDRESSES: Proposals shall be

submitted to Walter Kulyk, Director, Office of Mobility Innovation (TRI-10), Federal Transit Administration, 400 7th Street SW., Room 9402, Washington, DC 20590 and shall reference Electronic Payment System Demonstration. **ELIGIBILITY:** Only public transit agencies and metropolitan planning organizations (MPOs) in the United States are eligible to submit proposals in response to this RFP. In the case of MPO applicants, a statement explaining why a local transit partner is unable to submit the application and serve as a grantee must be included in the proposal. This eligibility restriction applies only to the agency submitting the proposal and serving as the applicant and does not limit project partners. All agencies submitting proposals in response to this notice consent to be publicly identified as respondents.

FOR FURTHER INFORMATION CONTACT: Bert Arrillaga, Chief, Service Innovation Division, (TRI–12), at (202) 366–0231 or Sean Ricketson, Office of Mobility Innovation, (TRI–11), at (202) 366–6678. This notice is posted on the FTA website on the Internet under http://www.fta.dot.gov/library/legal/fr99toc.htm. Questions and replies

regarding this notice will be posted on the FTA website under http:// www.fta.dot.gov/office/research/its.htm.

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I. Background

Recent developments in electronic payment systems and card technology present a unique opportunity for public and private institutions to establish mutually beneficial partnerships in the development and management of electronic payment systems for transportation. These developments include stored-value card systems created by financial institutions, contactless smart card systems for public transportation, electronic toll collection systems on highways and card systems for human service agency program management and benefits delivery. Private industry and public agencies foresee substantial benefits in establishing partnerships to develop further capabilities in electronic fee collection, delivery of benefits payments, funds transfer, settlement and clearinghouse functions. However, a number of institutional issues continue to restrict the formation of these partnerships. Through the development of an operational test this project intends to be a step towards identifying and addressing the complex institutional issues surrounding electronic payment systems in transportation.

The decision to focus the scope of the operational test on integrating transit fare collection, parking payment and electronic toll collection systems rests on a number of factors. Based on responses the US DOT received from the Federal Register Notice, Request for Letters of Interest in an Operational Test of Transit Fare Collection and Other Applications, dated November 24, 1998, it is considered that the transit industry is progressing in the development of integrated transit payment systems. With limited research funds available, the US DOT feels that this operational test could facilitate the next step to the development of an integrated, multimodal transportation payment system

infrastructure. However, there is a concern that a project integrating transit, parking and toll collection (given the modal balance found in most areas) may have a limited transit component.

Therefore, it has been determined that the lead applicant (the agency submitting the proposal and potential grantee) be limited to transit agencies or MPOs to ensure sufficient participation by a public transit partner. Because this eligibility is more restrictive than first presented in the Request for Letters of Interest, the response period to the RFP has been extended to ninety days.

II. Vision, Goals and Objective(s)

The vision this operational test supports is one of a seamless transportation payment infrastructure where local transportation agencies and other organizations are not limited by institutional constraints in the development of transportation payment products. Examples of possible products are pre-paid integrated accounts for toll payment, parking and transit, or stored value cards for transit and parking meter use. Ideally, only local creativity and transportation needs should limit the development of such products.

While the goals and objectives described below are focused on technical and institutional outcomes, the success of the test will depend upon whether it makes a positive contribution to the enhancement of local transportation service and operational efficiency. This focus must be maintained throughout the lifecycle of the operational test (planning, development, implementation and evaluation) by the grantee.

The goal of the operational test is to provide solutions to transit and other service providers exploring the feasibility of developing multi-modal transportation payment systems and integrating transportation payment with other payment applications. Additionally, the operational test is intended to offer insight to those interested private sector partners (i.e., the electronic payments industry, financial services industry, and other industries) interested in integrating their services with a transportation payment system.

The objective of the operational test is to evaluate and document the integration of transit fare collection, parking payment and electronic toll collection within one coordinated payment system. Additional objectives, if feasible, are to evaluate and document the viability and benefits of integrating transportation payment systems with other payment applications.

III. Project Development

A. General

The operational test will need to achieve an optimal balance of meeting local transportation needs while also providing a worthwhile national model of payment system coordination and partnerships.

B. Management Oversight

The grantee and other local partners in the project will manage the operational test. Additional guidance will be provided by a U.S. DOT committee composed of transportation industry representatives. This committee is already established by the U.S. DOT to provide feedback on electronic fare payment activities. The grantee will consult with the committee prior to any significant changes in project scope or direction. For this project, the committee may be augmented by experts from other industries as needed. Concurrently, this committee will direct a separately funded effort being conducted by the U.S. DOT to develop and document a set of guidelines for the integration of electronic fare payment with other payment systems. These guidelines will provide recommendations for the integration of transit payment systems with other payment systems such as benefits transfer, toll collection, security, parking, retail, financial services, telephony, identification and access control. The results of the operational test are intended to contribute to the advancement of the guidelines document. In turn, the development of the guidelines document is intended to assist the committee, the grantee, and local partners with the implementation of the operational test.

IV. Partnerships

The U.S. DOT will work with the lead public agency (applicant/grantee) participating in the project to ensure the needed support to achieve the objectives of the field operational test. The U.S. DOT will verify that the required institutional, partnership and funding arrangements are in place. All necessary partnership arrangements and institutional agreements to support the proposed project need to be documented by the applicant in the proposal. The grantee and participating partners will be required to implement the first phase of the operational test within 24 months from the time the cooperative agreement is awarded.

V. National ITS Architecture

The National ITS Architecture provides a common structure for the design of Intelligent Transportation Systems (ITS). The architecture defines the function that must be performed to implement a given user service, the physical entities or subsystems where these functions reside, the interfaces/ information flows between the physical subsystems, and the communication requirements for the information flows. In addition, the architecture identifies and specifies the requirements for standards needed to support national and regional interoperability, as well as product standards needed to support economy of scale considerations in deployment. The proposal shall provide a "Statement of Intent" to develop a system consistent with the National ITS Architecture.

Proposals shall also provide a "Statement of Intent" to design a system that is consistent with SAE J1708T Bus Vehicle Area Network, the Transit Communications Interface Profiles (TCIP), and other applicable protocols, or standards requirements as these emerge from the National ITS Architecture Development Program. Information about SAE J1708T may be obtained from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, Pennsylvania, USA, 15096-0001; phone: 412-776-4841, fax: 412-776-5760, or through the Internet at http:// www.sae.org. Information about TCIP can be obtained on the TCIP homepage at http://www.tcip.org or by contacting the Institute of Transportation Engineers, 525 School St., SW, Suite 410 Washington, DC 20024; phone: 202-554–8050. Copies of the Architecture Definition Documents, the draft Standards Requirements Document, and the Standards Development Program from the Architecture Development Program are available from ITS America, 400 Virginia Avenue, SW, Suite 800, Washington, DC 20024, telephone 202-484–4847. Electronic copies are available on the ITS America Internet website, http://www.itsa.org. These documents provide insight into the definition of the National ITS Architecture, and the emerging approaches being taken toward standardizing interfaces that would support the integration of transportation management components.

In developing plans for standards and architectural consistency, proposals should recognize the practical benefits of this requirement. The ability to integrate systems and exchange data among applications offers some of the

strongest benefits of ITS. As an illustration of understanding of this point, plans should identify potential opportunities for integration and data sharing among fare payment and other systems and applications. Information about key indicators of the electronic payment component of the ITS metropolitan infrastructure and integration of it with other components can be found in, "Measuring ITS Deployment and Integration: August 1998" available through the Internet at URL Http://www.its.fhwa.dot.gov/ cyberdocs/welcome.htm, the report is document number 4372 in the **Electronic Document Library** maintained at this website

VI. Project Evaluation Activities

A major goal of the US DOT is to promote the development of innovative applications of advanced technologies. In order to encourage the widespread adoption of technological innovations, data and results from the operational test must be analyzed, documented and reported. Accordingly, evaluations are an integral part of the operational test and are critical to the success of the National ITS Program.

This electronic payment system operational test will be evaluated by a US DOT contractor funded separately by the US DOT. The contractor will develop an Evaluation Plan which will specify the data collection requirements which will enable an assessment of the achievement of the goals and objectives of the National ITS Program applicable to this project as well as the goals and objectives of the implementing organizations. The contractor will assemble all the data collected in accordance with the Evaluation Plan, analyze the data, and prepare the Evaluation Report. The Evaluation Plan will also include an assessment of the technological issues, operational issues, customer acceptance, system reliability, attitudes of implementing organizations, implementation and continuing operational costs, integration issues, and a variety of institutional issues including partnership arrangements, legal issues, clearinghouse operation, the reason for selecting the type of system (closed or open), and the success in obtaining multiple agency

The operational test partners (all participating agencies and institutions) will be involved in all phases of the evaluation. Partners will be expected to provide the local goals and objectives, review and comment on the Evaluation Plan, assist the contractor to collect the data specified in the Evaluation Plan (including any surveys that may be

necessary), provide information on external factors that may affect the project's results, and review and comment on the Evaluation Report prepared by the evaluation contractor.

VII. Funding

Federal funds available for this operational test are \$2.33 million. Federal funding shall not exceed 50% of total project costs.

Implementing organizations will be required to furnish the specified evaluation data and perform reviews of evaluation documents. No additional Federal funding will be provided for this effort. The evaluation activities conducted by the evaluation contractor will be funded separately by the US DOT.

The US DOT, the Comptroller General of the United States, and, if appropriate, individual States have the right to access all documents pertaining to the use of Federal ITS funds and non-Federal contributions. Non-Federal partners must submit sufficient documentation during final negotiations and on a regular basis during the life of the project to substantiate these costs. Such items as direct labor, fringe benefits, material costs, consultant costs, and subcontractor costs, and travel costs should be included in that documentation.

VIII. Schedule

The project must remain operational for a period long enough to obtain valid evaluation data. The data collection period will be for a minimum of twelve (12) months from the time that the project is fully operational (i.e., all elements are working as intended). Upon the completion of data collection there shall be a six (6) month period of analysis and report coordination before a final evaluation report is submitted. The system shall remain operational throughout the evaluation process until the final report is received by the US DOT, unless otherwise agreed to by the US DOT.

IX. Proposals

The US DOT will select one operational test proposal for funding under this RFP. Applications should, where possible, focus on utilizing currently available technology. The Department is specifically interested in an operational test that includes transit fare payment, parking payment and electronic toll collection.

Applications that offer the greatest potential for demonstrating and evaluating the benefits of using electronic fare payment in a multiapplication transportation environment with at least one private sector partnership are the most desirable.

Proposal Criteria

A proposal shall not exceed forty-five (45) pages in length including title, index, tables, maps, appendices, abstracts, resumes and other supporting materials. A page is defined as one (1) side of an 8½ by 11-inch paper, line spacing no smaller than 1.5 with a type font no smaller than 12 pt. Proposals exceeding forty-five (45) pages are strongly discouraged. Ten (10) copies plus an unbound reproducible copy of the proposal shall be submitted. The cover sheet or front page of the proposal shall include the name, address and phone number of an individual to whom correspondence and questions about the application may be directed. Each proposal shall include a Technical Plan, Financial Plan, and a Management and Staffing Plan that describes how the proposed objectives will be met within the specified time frame and budget. These plans should be structured so that they contain the following information.

A. Technical Plan

General Requirements

1. The technical plan must provide a general description of the local transit market, toll collection system(s), parking payment system(s), and other proposed payment system markets. Information shall include transit ridership statistics, toll plaza throughput statistics, parking systems and parking usage. Additionally, the technical plan must provide an outline of the current fare collection, toll collection and parking payment processes, and types of payment media currently in use. In addition, other potential public/private agency(s) involvement such as partnerships, merchants, retailers, etc. must be outlined.

2. Proposals must include documentation of any existing or planned interagency agreements or public/private cooperative arrangements necessary for the conduct of the operational test.

Project Overview

1. Define existing infrastructure (both physical and information technology) and support systems in place, e.g., current fare collection system and cash handling procedures, toll collection processes and parking collection processes as well as current systems of those additional non-transportation applications being considered for integration.

2. Describe how the existing infrastructure will be expanded and

used to support the proposed system. Identify existing technological and institutional linkages within and across modes.

3. Describe the proposed system and how it will be integrated with other non-transportation applications and participating private sector institutions.

4. Summarize the expectations of the proposed system (e.g. costs, benefits, risks, operations, maintenance issues, plans, and system support).

Technical Approach

The Technical Approach will be judged on its ability to incorporate the requirements of a multi-modal, multiapplication payment system within the transportation infrastructure. The U.S. DOT recognizes that a single payment instrument or technology may not meet all the stakeholders' needs in a region; however, proposals will be evaluated on demonstrated local willingness and capability to integrate the proposed services among the necessary partners in the transportation environment.

Within the Technical Approach the following areas need to be clearly addressed:

1. Define and describe the goals and objectives of the system, and the goals and objectives of each of the service providers participating in the proposed payment system. Address both customer service and operating efficiency.

2. Describe the system design concept. Describe the extent of proposed system integration, type(s) of proposed media and/or payment mechanisms, settlement and clearinghouse processes, and partners.

3. Describe implementation of the system in probable phases with funding for each phase clearly specified. Document the schedule of work, assumptions and technical uncertainties, and proposed specific approaches to resolve any uncertainties.

4. Describe the approach by which the system design concept will be refined, developed, and operationally tested.

5. Show evidence that the project team has considered service delivery issues. Examples include: Who will use any new payment media? What problems will it solve for the participating transportation providers? What will the benefits of the new system be and how will the project team market the system to the user?

6. Describe the plan for concluding the operational test (Closure Plan), indicating whether hardware, software, and infrastructure will remain in revenue service, be sold, or returned to participating vendors, if applicable. Closure Plans may be contingent upon the results of the operational test, in

which case more than one Closure Plan may be developed.

B. Management and Staffing Plan

Provide names and positions of all personnel related to managing the project. Identify key management and control responsibilities for the overall program. Provide a timeline and define key milestones and deliverables for the project. Provide estimated professional and technical staffing in staff-months and staff-hours. Demonstrate that the project manager is capable, available and able to commit to a level of involvement that ensures project success. Include biographical data on key management personnel.

C. Financial Plan

Provide a description of total project costs and of matching funds, if applicable.

Provide a system budget identifying costs for system design, development, implementation, project management, operations, maintenance and evaluation support

The applicant's evaluation support costs shall include the following information:

Breakdown costs identifying them by one of the following: (1) Local; (2) State; (3) Private; (4) Federal ITS; (5) Other Federal-aid; (6) Other (describe). **Note:** Costs attributed to Federal dollars proposed to be received through award of this operational test are Federal ITS.

Provide cost estimates by phase by funding year as defined in the technical plan.

All financial commitments to the project from both public and private sectors shall be documented in signed Memorandum of Understanding (MOU) and included in the proposal.

The proposal shall provide an indepth description and assessment of the total cost of achieving the objectives of the Electronic Fare Payment System field operational test. The Financial Plan should describe a phased approach that delineates what will be accomplished with the project funding.

The proposal should provide a comprehensive, concise plan that ensures systems integration of the functions necessary to support an electronic payment system for fare collection. The plan shall include a discussion of the ways in which design, acquisition, construction, and other procurement activities will affect systems integration.

X. Proposal Evaluation Criteria

All proposals must include a Technical Plan, Financial Plan, and Management and Staffing Plan that describes how the proposed objectives

will be met within the specified time frame and budget. The primary evaluation criterion for the proposal will be the degree to which the proposal demonstrates the potential for successfully testing a multi-use payment system with multi-modal transportation capability. Proposed projects must include viable transit fare collection, parking payment, and electronic toll collection components. Significant consideration will be given to those projects involving public agencies and private sector partners with previous work or experience developing and integrating electronic payment systems. Proposals must demonstrate local viability and must also show strong potential for providing the baseline for a national model. Proposals should emphasize the nature and arrangement of any public-private partnerships. Proposals should present the potential benefits as well as associated risks and costs to transportation agency partners. Significant consideration will be given to those projects with greater levels of private and local funding contributions.

Issued on: July 15, 1999.

Gordon J. Linton,

Administrator.

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