

OVERCOMING BARRIERS TO ITS--
LESSONS FROM OTHER TECHNOLOGIES

FINAL TASK E REPORT

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by

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ANALYSIS OF FRANCHISES AND LICENSE AGREEMENTS FOR THE PROVISION OF PUBLIC SERVICES

EXECUTIVE SUMMARY

The Task E report involves an analysis of franchises and license agreements for the provision of public services, which is the fourth in a series in the study. *Overcoming Barriers to ITS - Lessons from Other Technologies*. This report follows alternative franchise concepts from beginning to end: starting with the reasons that franchises were adopted, through a description of their operations and evolution, the differences or variations among actual franchise models and the reasons for those differences, the legal and institutional problems that were encountered and the means used to overcome those problems. The results of the analysis are used to review the lessons learned that can be applied to ITS. An ATMS (Advanced Transportation Management System) Economic Man-ix has also been provided that addresses the ATMS in terms of its primary economic characteristics, i.e. the type of good that it will provide, and examines the franchise functions, revenue sources, government functions and public-private arrangements for each type of good.

The following are the main conclusions and recommendations of the Task E report.

The number of franchises or licenses granted in a specific ITS service area for ATMS facilities is critical to the successful implementation of ITS. The solution is a function of the geographic and population definition of the markets, the monopoly characteristics of the ATMS provider and the need for innovative technology and services in later years of the franchise term.

Recommendations:

- ITS policymakers should carefully analyze market sizes, in terms of geographic size and population, by specifically reviewing similar technologies, such as cellular telephone, cable TV, electric power, telephone, personal communication services and water services.
- ITS policymakers should examine the technical proposals for ATMS and assess the natural monopoly characteristics that are inherent in them, if any, such as large fixed infrastructure cost and economies of scale.
- ITS policymakers must determine the level of services required from the ATMS and the likely need for innovative changes in technology and services during the term of the franchise.

Competitive bidding has the potential benefits of lower user fees, innovative technology and services, and more rapid deployment. Occasionally, there are side effects that may negate the benefits, such as proposing an innovative technology that is unproven and unavailable, resulting in delays, added costs and less of services.

Recommendations:

- ITS policymakers should develop numerous testbed projects and other full-scale business ventures in order to demonstrate the technical and financial viability of ITS and ITS-type projects.
- ITS policymakers will have to be careful that they are not misguided in the franchisee selection process by unproven and unavailable technology.
- ITS policymakers will need to be sensitive to their influence in the franchisee selection process and avoid the temptation to wield its authority in such a manner as to create over-promising by the applicants.

The standardization of technology has been a boon for cellular operators and users since it enhances mobility among markets and stimulates declining cost of the cellular telephone handset. This ensured that service would be compatible across all operators, providing economies of scale and reducing risk to manufacturers to provide equipment.

Recommendations:

- On the basis of the proposed technology and the public policy considerations, ITS policymakers should decide whether they want rapid deployment of ITS by means of standardized technology or a more diversified and, perhaps, innovative technology development.
- Whether or not the technology is standardized, ITS policymakers must ensure that there is some degree of compatibility of the ITS equipment, particularly the user devices, between different franchise areas.

The primary purpose of a franchise fee is to compensate for the franchisee's use of public rights-of-way. The fee is also used to cover the costs the franchisor incurs in administering the franchise, monitoring the performance of the operator and representing the interests of the general public. With the multiple technologies and services involved in ITS and the overlapping jurisdictions, the administration of a franchise for the provision of ITS facilities and services could require a significant effort. The characterization of the service, i.e. a public good or a private service, will influence the manner in which the costs are covered.

Recommendations:

- ITS policymakers need to make a philosophical decision whether franchise fees are expected to be net revenue generating sources for the franchisor or merely be compensatory for the rights-of-way privileges and costs of administration.
- After determining if the ITS services are primarily public goods to be provided by government bodies or are primarily private goods provided by private parties, ITS policymakers should determine if there should be a franchise fee for the rights-of-way and if the costs of administration should be paid through public or private funds.

The term of a franchise for an ITS system will be dependent primarily on the determination of what party assumes the financial risk of the project. Due to the capital intensive nature of an ATMS and the need for a predictable revenue stream, it is important to have reasonable assurance of non-competition and fixed terms and conditions in the franchise agreement over a relatively long period of time. This aspect of franchising for ITS will be particularly perplexing since it is likely that ITS technology will be both capital intensive and rapidly evolving, thus requiring innovation and additional investment during the term of the franchise.

Recommendations:

- If the financial risk for the ATMS is borne by the government, the ITS policymakers should grant franchises for relatively short periods in order to maintain flexibility and motivation for innovation.
- If the financial risk for the ATMS is borne by a private franchisee, the ITS policymakers should grant a franchise for a period that will allow for recoupment of the investment and a reasonable return on investment.
- When the ATMS designs and services become more clearly defined, the ITS policymakers should do additional research to determine the feasibility and likelihood of competition for the ATMS services during the assigned time period, and determine if it is necessary to provide non-competition protection in the franchise agreement.

Since ITS will require both a long-term franchise agreement and ongoing technology innovations, at least in the early years, special attention will need to be given to this aspect of the franchising model. Unless requirements for maintaining state of the art technology and corresponding provisions for cost recovery are included in the franchise document, the franchisee will have little incentive to make the desired investments, especially if the franchise is providing it with some type of protection from competition for its services.

Recommendations:

- ITS policymakers should include conditions in the franchise agreement that encourage, even require, reasonable upgrades to accommodate new ITS technology, while incorporating equitable provisions for the franchisee to recoup the additional investment and a reasonable return on the additional investment.

Since ITS will involve multiple jurisdictions, technology participants, service providers and end users, it will need legislation at the state or federal level that would create the authority to proceed with the multi-faceted project. In addition, a municipal ordinance is necessary in order to provide for the procedures to be followed in the franchising process, specific requirements that the applicants and eventual franchisee must meet, and authority for the franchising authority to enter into an agreement with the applicant that is selected.

Recommendations:

- ITS policymakers should establish a formal dialogue with the policymakers and relevant legislators that have recently been involved in similar private-public projects that required enabling legislation at various levels.
- ITS policymakers should formulate the basic parameters of the expected legislation that could include provisions for being financially self-supporting, non-encroaching on existing services and supplemental to existing transportation facilities rather than replacements.
- ITS policymakers should discuss the basic parameters with relevant legislators, government representatives at all levels, academicians, business representatives, financial experts and other parties that will have input.

The RFP must be an artfully written document that incorporates the definitions, procedures and requirements of the legislation, addresses the needs and interests in the service area and elicits clear and complete responses from the applicants in a format that allows a comparative analysis. The evaluation process must be clear to all the participants and conducted with the highest professionalism and integrity. The negotiations are usually used to clarify any outstanding issues and minor discrepancies uncovered during the evaluation and public hearings, but much of the effort during the franchising negotiations could be on creating an agreement that is "bankable" with large private financial markets, if the funding is to be provided from private sources, since the funding requirements will be quite large and long term.

Recommendations:

- ITS policymakers should ensure that the letter and intent of the enabling legislation are clearly and completely reflected in the Requests for Proposals and incorporated in the criteria and procedures for evaluating the franchise applicants.
- ITS policymakers should maintain the integrity of the enabling legislation in the franchise negotiations but be flexible enough to create a final agreement that meets the needs of the franchisor and enables the franchisee to recoup the investment, receive a reasonable return on the investment and be motivated to perform well for the full term of the franchise agreement.
- ITS policymakers should follow the legislative and franchising process precisely and thoroughly in order to prepare for the likely challenges that will come after the selection and award of the franchise.

INTRODUCTION

As indicated in Task C, which deals with models of public and private participation in ATMS/ATIS, the provision of ATMS lends itself to the use of regulated franchises since ATMS has natural monopoly characteristics. The fixed grid distribution characteristics of ATMS strongly suggest a tendency toward natural monopoly. ATMS is tied to the public infrastructure since it is likely to require access to and use of public rights-of-way for connections to controllers, traffic signals, ramp meters, variable and message signs. Second, ATMS will require integration and cooperation of receipt of data and output products within a given geographic area that would seem to possess substantial economies of integration,

ATIS (Advanced Traffic Information System) services, on the other hand, consist primarily of traffic surveillance, database and telecommunications services, that are not so tied to the public infrastructure and lend themselves to more competition in the selection of multiple participants. However, certain functions of ATIS will be large enough to exhibit economies of scale in which a type of regulated franchise may be appropriate.

Regulated franchises have characteristics, such as insulation from certain risks, that may encourage rapid development of ATMS/ATIS services by the private sector, including private funding. Conversely, the need to renegotiate the franchise after its initial term, the negotiating leverage of an incumbent franchisee, the difficulties of dealing with the incumbent's existing facilities if a new franchisee is selected at the end of the initial term, and other considerations are limiting factors in the use of franchises. Furthermore, the need for interaction between ATMS/ATIS systems in a region and beyond will require some degree of standardization, but franchises are generally granted locally or area-wide, thus creating the need for uniformity of approach or standardization, most likely by a government entity.

Cable television, cellular telephone, broadcasting, mass transit and public utilities generally use regulated franchises or franchise-like licenses to select and monitor the operators for the designated services. Each industry has certain characteristics and needs that lead to franchises that are unique to that industry, but they all have certain common elements in the franchise agreements that should be investigated for application to potential model franchise agreements that are applicable to ATMS, ATIS or both. Specific examination is presented below in Task E of the history and implementation of franchises and licenses in cable television and cellular telephone, including the pros and cons of various aspects of the use of franchise agreements in these industries. Additional comments are provided concerning licensing activity for energy companies, such as gas and electric. Since special attention is being given to the privatization of various government services, a summary is provided of California's transportation privatization program.

CABLE TELEVISION FRANCHISES

Establishment and Evolution

Early Development

Although the cable television industry operated from its inception in 1949 to 1962 virtually without any standardized form of regulation, franchises were granted on a local basis almost from the beginning. Franchise areas were generally beyond acceptable television reception so franchisors welcomed cable TV operators since the level of television service would be expanded and improved. However, they were concerned about the cable TV operator's need to use some of the public rights-of-way in order to construct the cable distribution plant. The franchisors, i.e. cities and counties, had responsibilities to the general public to control the use of public rights-of-way, ensure the safety of local residents and businesses, protect the facilities of other users of the public rights-of-way, and obtain compensation for use of rights-of-way by private companies.

The right to use public rights-of-way was generally not included in a local business license so a specific authorization was granted to cable TV operators in the form of a cable television franchise agreement. The early franchise documents were often only one-page agreements that had minimal requirements. Additions to the agreement usually consisted of technical specifications from the public works department that related to pole attachment and spacing, underground trenching and street crossing requirements. Subsequent franchise documents expanded dramatically as new technology and services developed and the relationship between the franchisor and franchisee changed.

Basis for Franchise Fees

Since the granting of a franchise provided a de facto or de jure monopoly for cable TV services, the franchisors recognized that a franchise agreement had value to a cable TV operator. Accordingly, a franchise agreement was generally a requirement for providing cable TV service to the residents in the area defined by the franchise for which the franchisors instituted a franchise fee to be paid by the cable TV operator. The fee was based on a percentage of the operator's revenues or a specified fee per subscriber in the franchise area. The purpose of the franchise fee was to compensate for the franchisee's use of public rights-of-way. The fee was also often used to cover the costs the franchisor incurred in administering the franchise, monitoring the performance of the operator and representing the interests of the general public with respect to cable TV matters.

With the multiple technologies and services involved in ITS and the overlapping jurisdictions, the administration of a franchise for the provision of ITS facilities and services could require an effort significantly greater than for cable TV. Often times, the franchise fees for a cable TV system are greater than the costs to administer the franchise so the franchise becomes a net-revenue generator for the franchisor. This is not likely to be the case with ITS since the administration of the franchise will probably be much more active than for cable TV. The administration of the franchise will be complicated by the multiple jurisdictions in the geographic area served by the ITS system but also by the different regulatory bodies at the local, regional, state and federal levels. For instance, the Federal Communications Commission (FCC) may be involved on an ongoing basis in the communications aspects of the system, the Public Utilities Commission (PUC) may be involved in ratemaking process and the commerce commissions at the regional, state and federal levels may be involved in the trade and commerce issues.

The effect of the multiple participants in the administration of the franchise is likely to be additional costs that will have to be borne by the franchisor, i.e. taxpayers, operator or users.

Requirements for Performance

In the early days of cable TV (1950s through the early 1970s), franchisors were desirous to have cable TV systems developed in their communities so they used franchises as inducements to cable TV operators. There was only token bidding, if any, for franchises since there were ample opportunities available. This situation led some operators to obtain more franchises than they could construct and develop so they would “warehouse” the franchises until they were able to proceed. Franchisors became impatient and some franchises were eventually rescinded or abandoned, thus creating delays for the receipt of cable TV service in those markets. The obvious lesson learned for ITS franchisors is the requirement for performance by the franchisee in a specified period time and the assurance that the franchisee is financially and technically qualified to meet the performance requirements.

Franchise Term

The effect of the franchises was to provide a monopoly, usually a de facto monopoly, to the cable TV operator for a specified number of years, usually 15 - 20 years, under relatively fixed terms and conditions. Due to the capital intensive nature of a cable system and the need for a predictable revenue stream, it was essential for a cable TV operator to have assurance of non-competition and fixed terms and conditions in order to make the necessary large investment. This aspect of franchising for ITS will be particularly perplexing since it is likely that ITS technology will be both capital intensive and rapidly evolving, thus requiring innovation and additional investment during the term of the franchise. In addition, the provision of a period of de facto or de jure monopoly in order to encourage large investment by the franchisee may jeopardize the innovation that will be needed and which may be stimulated by some degree of competition.

Changing Partners

In the early years cable TV was welcomed by broadcasters since it allowed television signals to be viewed in communities that would otherwise be unable to receive the signals due to distance and terrain limitations. However, when cable TV operators began to import “distant” signals from other markets into the local market, the local broadcasters felt threatened and began to push the Federal Communications Commission (FCC) for cable TV regulations that would protect the broadcasters. The FCC contended that cable TV was merely a reception service and did not fall into the category of “broadcasting” so there was no authority or merit to promulgating any regulations associated with cable. Furthermore, the technical specifications were adequately dealt with by local franchisors and utility companies.

Eventually, in the 1960s, the FCC issued regulations at various times that limited cable TV operators’ ability to import distant signals into the local market. By this time, a significant portion of the communities that suffered from poor or non-existent reception had been wired and the need had shifted to include more diversity of programming rather than only better reception. With the inability to import distant signals and absence of any other programming sources, such as satellite services, the franchising activity declined significantly. In the late 1960s the FCC made a slight relaxation of the distant signal carriage rules, but the signals were subject to copyright fees that deterred the attractiveness of offering them. When the FCC regulations became more accommodating to cable TV operators in the mid-to-late

1970s there was increased activity in cable TV franchising and the cable TV industry grew dramatically. The adversarial relationship with the broadcasters became more intense as cable programming attracted more viewership.

The same situation may evolve among the infrastructure and service providers of ITS as new technologies and opportunities develop. For instance, an ATIS service provider, such as a travel agency, may be equipped to use the data provided from the ATMS in order to enhance its existing services and substantially leverage its revenue potential. However, as the ATMS/ATIS system becomes more sophisticated, generally accepted and user friendly, others may be able to process the data more efficiently and economically that could jeopardize the profitability and existence of some who earlier profited from their strategic position in the ITS business.

Competitive Franchising

The changes in regulations in cable TV regulations happened at the same time that a host of new programming services were available to cable TV operators through satellite delivery. This enabled cable operators to market their services to those places that had good off-air television reception but were desirous of a greater number and variety of programming options. Markets that previously were not candidates for cable TV franchising suddenly became of interest for both the potential franchisees and franchisors.

Operators were finding franchising competition in most of the markets since there was heightened interest in the cable TV industry, thus drawing many new entrants, and many of the markets had already been franchised. Although there were thousands of unfranchised markets, the potential franchisees considered attractive markets to be limited. Accordingly, there was a more competitive franchising environment, i.e. supply and demand forces. This situation led the franchisors, especially those with the most attractive markets, to increase the franchising requirements, including detailed responses to RFPs and significant commitments for the provision of public access equipment and institutional networks. Leverage in the franchising process was shifting from the franchisees to the franchisors.

As franchisors began to wield more leverage and make stronger RFP demands, the applicants were generally accommodating in their efforts to meet the perceived needs of the public and gain favor with the franchising authorities. There evolved a franchising competition even among franchising authorities to supposedly achieve the greatest benefits for the community's consumers. Theoretically, this type of competitive bidding can benefit the consumers, communities and cable industry by pushing advanced technologies and services and making the applicants more responsive to the communities' needs. In some cases, it led to excessive costs and under-utilized facilities.

In most cases the notion of building for the future was commendable and seemingly rational. However, the necessary technology and programming were not available and were slower to develop than expected, thus causing the cost-benefit relationship to impact negatively on the operator while the consumers and franchising authority did not receive the benefits for which they had hoped. This type of situation will be a great temptation in ITS franchises since the franchisor will want the most advanced technology and the applicants will want to gain favor by proposing the most sophisticated and advanced technology and services, regardless of their current state of development. To avoid the selection of unproven technology and services it will be necessary to develop numerous testbed projects and other full-

scale business ventures in order to demonstrate the technical and financial viability of ITS and ITS-type projects.

State Cable TV Regulatory Bodies

Although the vast majority of cable TV franchises are authorized and administered by local authorities, i.e. cities and counties, there are five states that have preempted the local authorities and have assumed the responsibility and direction of the franchising activities in their states. These states are Alaska, Connecticut, Hawaii, New Jersey, Rhode Island and Vermont. In these states the franchise specifications, RFPs, applicant responses, public hearings, franchisee selection, administering and monitoring are performed by a state government office. Massachusetts, Minnesota and New York have state-directed commissions that provide specifications, guidance, oversight and related services to the local authorities that perform the basic franchising functions.

States will clearly need to be involved in virtually all aspects of the development of ITS, but the nature of their roles is uncertain and the benefits of their participation is mixed. For instance, during the mid-to-late 1980s the overall subscriber rates in the cable industry rose substantially, but it was interesting that the subscriber rates that were regulated by state PUC-like commissions were comparable to the overall rates, rather than being lower. In addition, the promises for unproven, advanced technologies and the provision of under-utilized non-revenue generating equipment and services was just as great in franchises that were regulated by state commissions. However, since ITS is focused primarily on highways, with many of them being owned and operated by the states, the level of involvement by the states in the franchising, construction and operation of the system will be much greater than the cable TV model.

Municipal Ownership

The franchisee for a cable TV franchise does not have to be a private operator, but can be cities, counties, cooperatives or other types of quasi-municipal bodies. Currently, and over the years, less than 1% of the cable TV systems have been franchised, built and operated by a municipal body. Despite the perceived synergies and economies, there have been very few municipally-owned and operated cable TV systems for the following reasons:

- The initial capital investment for a cable TV system is large and the corresponding revenues may be small in the early years, leading to a relatively long period (7 - 10 years) to achieve recoupment of the investment. Accordingly, the municipality must commit to long-term financing through increased taxes, bond issues or outside sources, all of which place a financial burden on the municipality and its citizens, regardless of the expected long-term benefits.
- If the municipality commits to a long-term financing arrangement that encumbers its resources, there are questions about making such a commitment for a non-essential service that will be used by only a portion of the residents.
- The perceived synergies with other municipally-operated services, such as electric power and road maintenance, may not be as significant as desired. The staffing, skills and expertise of the existing organizations are often much different than those needed to provide cable TV. In addition, the provision of a discretionary, competitive entertainment service can often be

difficult for the municipality to adjust to in terms of its operating procedures, general policies and overall mindset.

- The nature of the financing arrangements can be a constraint on the system's ability and incentive to upgrade with new technology prior to the recoupment of the investment and exhaustion of the original equipment. In the absence of a profit objective, there is little incentive for management to operate in the most efficient manner or add new services.
- There are generally concerns about infringements of the First Amendment concerning free speech and the separation of governments from owning or operating media. Since cable TV operators are the "gatekeepers" of the programming that is provided on the cable TV system and are also originators of some of the local programming, the possibility exists that a municipally-owned operator would exercise control and direction of the programming that may be inconsistent with the rights and desires of the public.

The first four of the above limitations may apply to the development of virtually any new services by a municipally-owned entity. However, ITS is so integrally related to municipally-owned facilities, i.e. highways, and municipally-provided services, such as public safety and traffic control, that it is inevitable that portions of the ITS system will be owned and, perhaps, operated by the local government.

Key Franchise Components and Their Differences

The franchising process involves (1) the preparation of a cable ordinance, (2) issuance of a request for proposals (RFP), (3) evaluation of the proposals and selection of the franchisee and (4) negotiating a franchise agreement with the successful bidder. An ordinance is not always needed if the franchising authority has the authority to enter directly into contractual franchise agreements and the franchise agreement contains all of the terms and conditions that would otherwise be included in an ordinance.

Ordinances

An ordinance basically provides for the procedures to be followed in the franchising process, specifies some of the requirements that the applicants and eventual franchisee must meet, and authorizes the franchising authority to enter into an agreement with the applicant that is selected. Some of the common components of an ordinance are as follows:

- Definitions
- Procedure for submitting an application
- Procedure for evaluation and selection
- Procedure for negotiating a franchise agreement
- Administration and monitoring of the franchise
- Subscriber and user fees and records
- Franchise fees
- Term of the agreement
- Provisions for transfer or assignment
- Provisions for renewal
- Insurance and bonding requirements
- Required books and records

- Service extension requirements
- Complaint procedures
- Provisions for protection of privacy
- Provisions for arbitration and revocation
- Provisions for or limitations for non-video services.

In a franchise ordinance that involves the ownership of any portion of the ITS, especially the ATMS, particular attention will have to be given to the incentives for private investment, the method of determining the return on investment, the monitoring and reporting requirements associated with the private investment and the process for determining user fees. In addition, the ordinance will need to address the relationships among the overlapping jurisdictions in order to give adequate guidance to the bidders concerning regulations, specifications, administration and monitoring. There will also be cases in which the ordinance must provide the bidders the necessary assurance that the winning ITS bidder will receive some degree of protection from competing services for a specified period in order to give the bidder adequate incentive to make the large investments.

Request for Proposals (RFP)

The RFP must be an artfully written document that incorporates the definitions, procedures and requirements of the ordinance, addresses the needs and interests of the municipality and elicits clear and complete responses from the applicants in a format that allows a comparative analysis. Usually the RFP references the terms of the associated ordinance, indicates the evaluation criteria, provides information about the franchise area, specifies the issues to be addressed by the applicant in his responses and includes various studies, specifications, local regulations and other material that may be useful to the applicants.

Some of the general components of an RFP are as follows:

- Evaluation criteria
- Franchise area information
- Ownership, experience and financial resources
- Financial experience and projections
- Construction and service area
- System design
- Channel allocation
- Rates and fees
- Local programming and leased access
- Institutional network services
- Employment practices
- Billing practices and complaint procedures
- Term of franchise and franchise fees.

In some cases, it is appropriate to precede the RFP with a Request for Information (RFI) in order to identify the qualified bidders and establish a dialogue with them that will enhance the RFP and the quality and comprehensiveness of the responses. In projects as large and complicated as those contemplated in ITS, the use of an RFI would be useful.

Evaluation

The evaluation is a crucial step in the franchise process. There are many factors that must be considered and weighed during the process.

First, the evaluator must ascertain whether the applicants are legally qualified to be the franchisee, i.e. whether any company has an interest in another local communication medium that would disqualify it from operating a system under the crossownership rules of the FCC.

Assuming all of the applicants are legally qualified, the financial proposals must then be analyzed. These proposals carry a great deal of weight, having an important effect on all the other factors considered. Evaluators must pay close attention to the strength and credibility of financial commitments, the financial ability to fulfill the proposed plans, the adequacy of the financial projections and the ability to meet projected construction requirements. If any of these areas are found to be lacking, the feasibility of the proposals contained in the remainder of the application must be questioned.

The credibility of the technical provisions is obviously also extremely important. Each proposal must be carefully analyzed to see that its components are compatible and that their costs are reflected accurately in the financial projections. Because technology is so rapidly evolving, many applicants may be prone to propose system designs that are still in the experimental stages. Evaluators must be especially careful in these cases to see that the applicant has proposed an alternative design in case the more innovative approach is shown to be unworkable or if the equipment associated with the newer technology is unavailable.

Since there are no existing ITS systems or standards, the technical evaluation will be especially difficult. By definition, the ITS system will be new and unproven on a large scale, but most of the elements may consist of technology that has been adequately proven in test projects and satisfactory for implementation in a new ITS system. Accordingly, evaluators will not be faced with selecting technologies that are merely “paper designs” but, rather, from demonstrated technology.

The programming and services proposed by the applicants for a cable TV franchise and the rate structures applied to the services will also be examined. Care must be taken to see that the proposed services are sensitive to community needs. Access and local origination commitments play a large role in this analysis as do the proposed entertainment and information services. Rates are evaluated on the basis of whether they are reasonable yet still able to support the proposed services.

An analysis of the potential services and fees for ITS will be difficult since the services and fees have not been directly tested in the market. The situation is similar to the determination of the proper package of services and rates for the developing interactive industry since the public’s response to market surveys is questionable due to the difficulty of interpreting their interest in services that do not currently exist and cannot be adequately described. Evaluators will have to compare the experience in services and rates that are the most similar to the those being proposed.

The overall evaluation process is generally divided into two phases. First, each application is categorized and examined individually to determine if the factors outlined above are consistent and supportive of one another. Then, a comparative analysis is performed among the competing applications to determine which applicant is the strongest contender in each category. Applicants that are considered

for the final selection should have strong showings in each category, since a significant deficiency, in any category would raise concerns about the applicant's ability to meet the terms of the franchise agreement.

Once the written evaluation is completed, there is typically a series of public hearings held to discuss the evaluation and give applicants an opportunity to highlight features of their proposals. Hearings may also be held earlier prior to the responses to the RFP in order to determine the interest, needs and concerns of the public that may be useful to the bidders in their responses and the franchisors in their evaluation. Strict ground rules are usually set to ensure that any statements made during the hearings relate to the initial proposal as submitted and, in effect, do not constitute a new proposal. In addition to the competing companies, the public is encouraged to participate in these meetings,

Selection

The final selection is then made based on the evaluation and the input received from the public hearings. Typically, the selection is the sole responsibility of the City Council or the state cable authority for those states that have assumed that responsibility and authority. The final selection can be subjective, with only modest quantitative analysis, or a point system can be used for the various categories, with the applicants earning points based on the evaluator's assessment of the applicants' responses.

Negotiation of Franchise Agreement

When the successful applicant is chosen, a series of negotiations may be held between the franchising officials and the cable operator prior to the final award of the franchise. Since the RFP incorporates the issues that are deemed to be important by the franchising authority, on behalf of the community, the franchising officials must be careful to incorporate all of the issues presented in the application in the final franchise agreement. The negotiations are usually used to clarify any outstanding issues and minor discrepancies uncovered during the evaluation and public hearings. When both parties are satisfied that all questions have been resolved, the franchise will be granted. It is common practice to incorporate the winning application into the franchise document, so the promises and proposals become part of the agreement and are, therefore, binding and enforceable.

The negotiation of an ITS franchise agreement will be considerably more difficult than a cable TV franchise agreement since ITS is a new business with no direct experience to rely on. The mixture of ATMS bidders, ATIS bidders, public interests at the local, state and federal levels, legislative and regulatory bodies and the plethora of arrangements that may be used to achieve the development of ITS will complicate the process. If some of the arrangements are innovative and involve new roles for private and government parties, additional stumbling blocks will need to be overcome.

Differences Among Franchise Agreements

The most significant differences among franchise agreements are in the (1) length of the franchise term, (2) the fees paid by the franchisee to the franchisor, (3) the requirement of non-revenue generating equipment and services for the franchisor's benefit and (4) the requirements for advanced technology and services and their maintenance during the franchise term. There are numerous other differences, such as insurance requirements, complaint procedures, system extension policies, renewal procedures, monitoring and review procedures, construction specifications and approvals, employment practices and other, mostly administrative, issues that are important but not of the magnitude as the four indicated above.

Length of the Franchise Term

The franchisee is desirous to have the longest possible franchise term in order to fix the terms under which he operates, maintain his de facto monopoly position for as long as possible, and plan his capital spending to fully benefit from the equipment and maximization of profit. Conversely, franchisors wish to maintain their flexibility for revisions in the franchise agreement and changes in the franchisee, while ensuring continued service for the subscribers. Much of the franchisee's anxiety can be allayed by inclusion of reasonable renewal procedures, and the same for the franchisor by incorporating certain competitive-like provisions that make the franchisee responsive to the consumers' needs and the changes in technology.

The term of a franchise for an ITS system will be dependent primarily on the determination of what party assumes the financial risk of the project. If the government body funds the construction and development of the project, and assumes ownership of the facilities, the role of the franchisee is primarily that of a contract operator. As such, the franchisee is unlikely to be required to make substantial long-term investments in facilities and equipment and will be facing modest financial risk. In this case the term of the franchise may be relatively short in order to provide the franchisor maximum flexibility in dealing with the franchisee. Conversely, if the franchisee is required to fund the facilities and equipment of an ATMS network, regardless of the current or ultimate ownership, the role is significantly different and the level of risk is dramatically higher. The term of the franchise would need to be long enough to achieve recoupment of the investment and a reasonable return on investment. This period of time could be considerably longer than the project developers and government franchisors can project the system's operations, thus causing a dilemma for both parties.

Amount of Franchise Fees

The fees paid by a cable TV franchisee to the franchisor are currently limited to a certain percentage of revenues, so the limiting percentage is becoming the norm rather than the negotiated amount. The franchise fees were relatively low, particularly in the early years, when franchising authorities were desirous to have cable developed in their communities and may have provided certain incentives to cable operators in order to encourage the development of cable TV in their communities. When the number of franchises became limited, especially those that were the most desirable, then the franchise fee offered by the cable operators became a competitive issue, resulting in higher than average fees.

A certain portion of the franchise fee could even be prepaid in a lump sum at the time of the franchise award or in some accelerated manner. Most franchises have a fixed franchise fee percentage for the term of the franchise while some provide for dates at which the fee can be renegotiated under certain conditions. In addition, the franchise fee has been computed on a range of revenue bases, ranging from only the basic revenue to the total revenues from all sources. The differences in franchise fee terms are becoming fewer since the passage of the Cable Act of 1984 which puts specific limiting conditions on the franchisors.

The franchise fee for an ITS system will likely be a genuine cost of administering and monitoring the franchise agreement, in light of the multiple participants and overlapping jurisdictions. Accordingly, the franchise fee will probably not be viewed as a net revenue generator for the franchisor and will be compensatory for the services provided by the franchisor. However, in the event the ITS services are

considered a public good, there may be no franchise fee since the administration costs would be borne by the franchisor. If the ITS system is profitable on the services other than those considered to a public good, there may be a franchise fee which could equal or exceed the administrative costs.

Non-Revenue Generating Equipment and Services

Some franchisors made significant demands on cable TV applicants for non-revenue generating equipment and services that benefitted the franchisor and the public. Regardless of the demands of the franchisor, the applicants would often offer equipment, services and funding that were well beyond the franchisor's demands in order to gain a competitive edge in the bidding process. These equipment and services usually involved the provision of local channels for public, education and governmental purposes, as well as producing locally originated programming. The requirements could range from the provision of one channel to be shared by all parties to the provision of dedicated channels for virtually all schools, major governmental units and organized interest groups. If the channel capacity was adequate, the provision of the additional channels was not financially burdensome to the operator. The real costs came in the form of extensive and sophisticated video production equipment and facilities, training for anyone wishing to participate, provision of the operator's staff for this activity. Funding was in addition to the normal franchise fees.

Since an ITS franchisee would be making extensive use of the franchisor's rights-of-way and facilities, there could be an expectation by the franchisor that some of its related facilities would be replaced or improved by the franchisee as a part of the overall effort. This effort could spill over into other activities of the franchisor that are only modestly related to the ITS effort and generate meaningful costs that are borne by the ITS project. The temptation is greatest during the RFP and evaluation period when applicants are attempting to demonstrate the level of their interest and commitment to the community and to gain favor with the franchising authority.

Advanced Technology and Services

Franchise agreements differ significantly concerning the requirements for advanced technology and services and their maintenance during the term of the franchise. Many franchisors feel it is their responsibility to the public to ensure that the state of the art (and sometimes beyond) is achieved in the initial system and maintained as the state of the art is enhanced. Other franchisors choose to leave the initial system to the result of the competition in the application process and the subsequent maintenance to the demands of the market and other competition, if any.

Historically, cable TV operators have rebuilt and upgraded their systems when it was necessary to maintain their normal level of services and revenues or when the opportunity was evident to profitably add new services and revenues. Generally, the operators were reluctant to invest in system enhancements in order to improve the quality or reliability or to develop new and uncertain technologies and services. In addition, franchisors were often not anxious to make state of the art requirements since they were very difficult to properly phrase and even more difficult to enforce. Furthermore, when the franchisor made demands for additional investment, it was only fair to permit commensurate rate increases that could be detrimental to the majority of the subscribers if the results of the additional investment benefitted only a few subscribers or proved to be a failure.

Since ITS will require both a long-term franchise agreement and ongoing technology innovations, at least in the early years, special attention will need to be given to this aspect of the franchising model. The magnitude of the expected investment is such that the franchisee will seek a long-term franchise agreement in order to recoup the investment and achieve a reasonable return on investment. Unless requirements for maintaining state of the art technology and corresponding provisions for cost recovery are included in the franchise document, the franchisee will have little incentive to make the desired investments, especially if the franchise is providing it with some type of protection from competition for its services. Crafting language in the franchise document that adequately meets the needs of the franchisor and franchisee will be difficult since the interpretation of the requirements can be divergent, especially in the later years when the circumstances have changed, and the implementation of the state of the art requirements can create additional investment that will need to be recouped through increased user fees.

Reasons for the Differences

One of the primary reasons for the differences in franchise agreements is the different philosophical position taken toward cable TV by the different franchising authorities. Most agree that cable TV systems have tremendous potential for the delivery of a broad range of public services, including municipal services, health care services and educational services. It also can expand the outlets for expression in the local community and provide locally oriented programming. Therefore, many franchising authorities have taken the position that cable TV franchises should include terms and conditions that ensure that the perceived needs and interests of the residents and institutions of the community are met. Other franchising authorities believe that, despite cable TV's public service potential, these services should evolve through indications of subscriber interests and primarily by supplementary revenues from the primary users of the services.

Many of the differences were due not to the desires of either party but to the negotiating leverage of the parties. Early in cable TV's development, the leverage lay with the operators since municipalities with inadequate or nonexistent television service were willing to make concessions of long franchise terms, low franchise fees and minimal technical requirements. As the industry developed and cable started to penetrate larger markets, the nature of the industry shifted somewhat to a multi-channel entertainment service instead of merely a reception improvement service and the leverage shifted. This opened up the franchising of the large suburban areas and led to the competitive franchising frenzy of the late 1970s and 1980s, thus changing the terms and conditions of the franchising agreements. The franchising process became very arduous, the documents were detailed and comprehensive, the demands were escalated and the costs of participating were high. However, the industry is still a mixture of small, medium, large and urban systems with different needs and interests that results in a range of franchise agreements from one or two pages to those of several hundred pages plus the corresponding application documents. ITS will probably follow a reverse course by developing first in the larger markets and only later into the smaller markets.

CELLULAR FRANCHISE/LICENSING

The ITS industry can benefit from the licensing experience the cellular industry experienced in its formative years. Similar to the cellular industry, the ITS industry faces uncertainty in technology deployment, services offered, and public versus private concerns in the licensing process. This section

examines the formation of license rules for cellular, how they were applied to the license holders. and problems encountered in the licensing process and rules.

Rationale and Evolution of Cellular Licensing

The impetus for introducing cellular technology grew largely out of the shortcomings of the prior mobile technology, called Improved Mobile Telephone Service (IMTS). In most areas of the U.S., IMTS systems became saturated with customers and new customers could not be added. In any one area, only 800 - 1,000 customers could be accommodated. This capacity constraint was due to a 1949 FCC decision that allocated over 400 MHz of spectrum to television broadcasters and none to mobile telephony. Thus, large scale mobile telephony systems were effectively precluded until the FCC allocated additional spectrum.

After years of lobbying by AT&T, the FCC reconsidered its frequency allocation and transferred some television frequencies to mobile radio service in 1968. FCC Docket 18262, known as the Cellular Docket, opened up the real possibility of cellular telephone service.

This milestone, however, was followed by political wrangling regarding who should be licensed to provide cellular service, how many operators there should be, how licenses should be allocated geographically, and the terms and conditions of interconnection with the public telephone network. These issues hampered the introduction of cellular as interested parties battled for potentially lucrative cellular licenses. The most important regulatory decisions the FCC made shaping the industry were:

- regulated duopoly structure
- licenses broken down into 305 MSA and 327 RSA markets
- licenses set aside for local telephone exchange providers
- initial comparative system for awarding licenses, then replaced by lottery system for awarding licenses
- no restrictions on the sale of licenses
- analog communications standard of AMPS
- quality standards for service
- construction requirements
- licensee renewals.

Regulated Duopoly

One of the most significant decisions regarding the structure of the cellular industry was the determination of how many licenses should be awarded per geographic region. Some felt that the market could not support more than one license, while others argued that competition was feasible and desirable.

AT&T believed that by virtue of its market position and pioneering status in cellular technology, it would be granted monopoly rights for the service. The FCC, under pressure to provide competition in the marketplace, instead granted two licenses for 728 regions of the U.S. AT&T formed a subsidiary in 1980 to secure one of the licenses for the entire U.S. The ability of AT&T to offer cellular service, however, was taken away by the divestiture of AT&T in 1982, which separated the ability to offer local telephone service and cellular service from the ability to offer long distance service.

The number of franchises or licenses granted in a specific ITS service area for ATMS facilities is critical to the successful implementation of ITS. ATMS has the characteristics of a natural monopoly, in view of its use of public rights-of-way, large investment and economies of scale. The desire for innovations in technology and services through competition, however, make the decision about the number of franchisees difficult. The regulated duopoly in cellular telephone has created competition for customers through heightened advertising and marketing, but has had only a marginal impact on lower rates and enhanced technology. Whether ATMS could viably support more than one provider in a given market is probably much more questionable than with cellular. Competition in the provision of ATIS, on the other hand, is far more likely due to the nature of function in providing the services to the consumers, often through a multiplicity of existing, proven technologies, such as telephone, cellular, television, radio and microwave.

MSA and RSA Licensing of Markets

The FCC adopted a licensing scheme that divided the country into 305 metropolitan statistical areas (MSAs) and 427 rural statistical areas (RSAs). MSAs were licensed first, while RSA licensing did not start until 1988. The FCC divided the country into these areas not to limit the geographic coverage of the operators, but rather as a means to provide both wireline affiliated and non-wireline firms an opportunity to provide cellular service.

The selection of the geographical areas may be as critical as determining the number of licensees in a specific area. Either the areas will need to be large enough that the economies of scale that are needed for an ATMS system will be present, or the licensees will need to be allowed to aggregate licenses into contiguous areas that meet the size requirements. In either case, there will need to be extensive coordination among the jurisdictions, either when the geographic license areas are initially determined, during the bidding process when licensees are attempting to form contiguous clusters, or after the license awards when licenses are being traded in order to achieve the desired clusters.

Licenses Set Aside for Local Telephone Companies

When creating the duopoly structure, the FCC set aside one license (the wireline B band) exclusively for local telcos. The other license was the A band for non-wireline service providers. In many cases, there was only one telco eligible for a license, so no competition for the license was necessary. In other cases, where more than one telco was eligible, settlement agreements were usually reached between the potential licensees before a competitive bidding took place. Because the telcos did not have to go through the competitive (and later, lottery process), they usually had a headstart on the non-wireline licensees of several months to several years. In order to negate the headstart advantage, the FCC required that operators allow reselling of their services. Thus, the non-wireline licensee could resell services from the wireline side before it built its own system.

Lottery System for Licensees

One of the major factors affecting the structure and growth of the cellular industry was the FCC decision to move from a comparative hearings process format of awarding licenses to a lottery system. The FCC awarded the first cellular licenses in the top 30 markets on a comparative basis. This process proved very cumbersome and resulted in lengthy delays. Potential license holders would submit voluminous amounts of back-up data in support of their applications. The FCC would be put in a position

f deciding the best company when there was very little substantial difference among applicants. In addition, once a determination was made, the losing side would appeal the decision, creating additional delays in the final awarding of the license.

Another problem with the comparative process was that the FCC had to set the comparative criteria for what was a new service with which it had little or no experience or knowledge. As a result, applicants were compared based on pre-set factors that experience subsequently proved not to be very relevant to good service. This is a risk that, as a new service, ITS might well face.

The FCC stopped comparative hearings after the first 30 markets were awarded, moving to a lottery system for the remaining MSA and RSA markets. But the FCC since discovered that the lottery process posed problems as well. "Application mills" sprang up that prepared thousands of applications for cellular licenses. The result was that cellular licenses were awarded to individuals who had no knowledge of the business but were willing to merely pay the application fees and hope for a lucky draw in the lottery, and then sell their rights for a profit. Many of the lottery winners sold their licenses for millions of dollars before even beginning construction. Others hired cellular management companies to construct and operate their systems.

While the lottery system did speed up the process considerably, the flood of applications along with appeals and lawsuits over winning licenses delayed the licensing of many markets for months and often years. It also allowed arbitragers to capture the value of the spectrum rather than the public.

In light of the public service nature of the basic ITS services, i.e. public safety and enhancement of commerce, ITS licenses do not lend themselves to the lottery system in which uninformed, unqualified and uncommitted parties may be granted ITS licenses. Despite the lengthy process and the risk of litigation by unsuccessful bidders, it appears that the licensees should be chosen through some type of comparative process based on the submission of proposals, presentations at hearings and evaluation by qualified experts, i.e. chosen on the basis of merit instead of luck.

Analog Communications Standard

The FCC required all cellular systems to operate on a standard AMPS technology. This insured that service would be compatible across all operators, providing economies of scale and reducing risk to manufacturers to provide equipment.

The FCC also requires that all future digital systems continue to support AMPS. Thus, users will not be left with obsolete equipment when operators change from analog to digital technology.

The standardization of technology has been a boon for cellular operators and users since it enhances mobility among markets and stimulates declining cost of the cellular telephone handset. Since the focus has been on building the subscriber base and achieving the critical mass desired by the operators, there has not been significant pressure for technological improvements except for the need for conversion to digital service in a few large metropolitan areas. Would there have been more technology advances if the operators had not been constrained by the AMPS standard? No one knows for sure. The change in technology may come from new competition, such as Personal Communications Systems (PCS) and Enhanced Specialized Mobile Radio (ESMR) which have cellular-like services, rather than from technology advances by the cellular telephone industry.

Quality Standards for Service

The FCC required that cellular operators engineer their systems so that not more than 2% of attempted calls in the peak hours were blocked or unable to dial out. This insured that once signed up for service, a user would have acceptable levels of service in the future, and also have acceptable levels of service from other systems across the country.

FCC regulations also stipulate that other services can only be offered by cellular operators if these other services do not interfere with voice service. This regulation ensures that voice service is the primary service offering of cellular operators and ensures minimum service standards throughout the country.

The quality standards for ITS become an even more significant issue if the service is perceived to be a public safety service rather than a general business service. The added level of reliability for public safety needs can lead to increased infrastructure costs and operating expenses that will have to borne by the users, whether the general public through higher taxes, the overall ITS users through higher user fees or the primary beneficiaries through some type of a la carte pricing.

Construction Requirements

To guard against hoarding of spectrum or inefficient use of spectrum, the FCC mandated that cellular license holders must begin operations within 18 months of receiving the construction permit. In addition, cellular license holders have five years to build out their system. After five years, the uncovered geographic areas can be awarded to other interested parties.

Licensee Renewals

Cellular licenses were granted for a 10-year period. The FCC stated in its initial rules, however, that the licenses would have an expectancy of renewal associated with them unless there was just cause for terminating the license. Thus, cellular operators could invest in expensive infrastructure and new technology without the fear that their licenses would be taken away before they received adequate returns for their investment

This type of renewal process may be satisfactory for ATIS providers but may not be satisfactory for ATMS providers unless the initial license period is long enough to recoup the investment and achieve a reasonable return on investment. However, after the initial license period, assuming it is of adequate length for an ATMS provider, a reasonable expectation of renewal encourages an ongoing working relationship between the franchisor and franchisee and leads to greater commitment by the franchisee. On the other hand, too much renewal protection for the incumbent licensee may lead to poor performance. If the operator has some fear of competitive bids at the time of renewal he may be motivated to perform better.

Restrictions on the Sale of Licenses

The FCC did not place any restrictions on the sale of licenses, other than that foreigners were limited to 20 percent ownership of any license. Thus, cellular licenses could be easily bought and sold in a virtually unregulated market environment. One consequence of this approach is that a company could hold both A and B band cellular licenses in different licensed areas of the country. Many Regional Bell

Operating Companies (RBOCs) bought A band cellular licenses, originally intended for non-telcos. in order to have cellular operations in territories in which they were not local telco operators. Thus, an operator could be partners with an operator in one market, but competitors with the same operator in a different market

Differences Among Cellular Licenses

FCC rules regarding cellular licenses applied equally to all license holders, except that the RBOCs could not provide inter-LATA services under the rules of the AT&T Modified Final Judgment (MFJ). Since inter-LATA services were not allowed, the RBOCs had to pay a long distance carrier to provide connection between LATAs. even if the LATAs were in the same cellular coverage area of an operator. This created an inequity between the RBOCs and the non-wireline operators which did not have to incur this expense, and also prevented the RBOCs from offering a seamless coverage area compared to their non-RBOC competitors.

The RBOCs have been permitted to file petitions requesting that waivers be granted for certain inter-LATA areas. The waiver process is quite lengthy, however, and averages approximately 19 months. Since 1983, 58 waivers have been requested by the RBOCs, with 24 of them still pending.

The only other distinction the FCC made between cellular licenses was the distinction between MSA and RSA licenses. This distinction between MSA and RSA licenses was made primarily so the MSA licenses could be awarded first without delay as these licenses were in the most populated areas of the country. The distinction was artificial in the sense that it was only based on population, with the 305 most populated areas receiving MSA status and the next 427 areas receiving RSA status.

Differences between MSA and RSA were truly artificial for the cellular operators, as most operators acquired MSA and RSA markets next to each other and operated them as a single market.

Problems in the Licensing Process

The cellular industry faced many obstacles and delays in its licensing of cellular, such as the following:

- use of comparative hearings in the beginning
- application mills for the lottery process
- lengthy litigation for lottery winners due to challenges by losers.

As mentioned previously, the FCC originally started with comparative hearings to decide the license winners for the markets. The comparative hearings process was intended to evaluate each applicant's capability to provide cellular service based on the firm's financial strength, experience, proposed marketing plan, and overall technical capability. This process quickly led to lengthy and arbitrary decisions being made among many equal applicants based on very subtle and immaterial differences in their applications. In addition, the losers would institute legal challenges to the FCC's selection. Thus, out of a desire to speed up the deployment of cellular service to the public, the FCC went to the other extreme and instituted lotteries for the remaining MSA and RSA markets.

In the lottery process, the FCC made very minimum requirements of the applicants, none of which had to do with qualifications or expertise of the applicants to operate cellular systems. This led to application mills that would collect monies from thousands of applicants and fill out their applications for them. Thus, everybody from truck drivers to retired individuals won cellular licenses through sheer luck, with many of them having absolutely no knowledge of the industry beforehand.

Because there were no restrictions on the sale of the licenses, many of these lottery winners immediately sold their licenses for millions of dollars. Others hired management firms to operate their markets and sold their systems after several years. Very few lottery winners actually operated the markets themselves or still hold their licenses today.

Moreover, lotteries did not completely solve the delay problem, as many licenses were delayed by lengthy litigation by losers of the lottery. The main reasons for litigation were due to:

- application process irregularities
- alien ownership restrictions
- multiple applications by the same individual in a market
- tribal Indian eligibility.

While much of the litigation could be resolved quickly by the FCC, many cases took years to resolve in the courts before a final license could be awarded. Much of the litigation involved applicants that went through application mill companies and did not meet even the minimal FCC qualifications.

Non-legislative Actions to Correct Problems in the Licensing Process

The FCC's decision to license 305 MSA licenses and 427 RSA licenses resulted in a very fragmented industry in the beginning. The small size of most of the markets did not provide full economies of scale made possible by the technology and market forces. Thus, the cellular industry has been consolidating for the past 11 years to achieve full economies of scale in operations and marketing.

As the FCC did not place restrictions on the sale of licenses, the consolidation process has not been delayed or encumbered by regulations, but guided solely by competitive market forces. Most operators employed a cluster strategy in their acquisitions of markets that allowed them to operate multiple adjacent markets as a single market. Currently, large operators are joining together to provide for large regional and national economies of scale, illustrated by the RBOC companies of Bell Atlantic teaming with Nynex, and U.S. West teaming with AirTouch (formerly a division of PacTel).

The consolidation process may also take place for ITS systems after they are constructed and developed. This process will have to be monitored carefully to determine the current and expected impact of the consolidation, since the purpose of the process sometimes goes beyond economies of scale and efficient market goals and lead to the undue concentration of market power. Not only could this situation lead to disruptions in the pricing mechanism, technology advances and service levels, but can also cause a lack of responsiveness to local needs.

CALIFORNIA' S TRANSPORTATION PRIVATIZATION PROGRAM ASSEMBLY BILL 680 (AB 680)

A variation of the franchising approach is being implemented in the State of California's development of four highway projects. The State has granted exclusive franchises, non-competition agreements and market level toll revenues to the private operators in exchange for the operator's project funding, innovative technology development and financial performance risk. California's transportation privatization program was initiated and developed by the California Department of Transportation (Caltrans) and the history of the program is described in detail in a report entitled "Private Toll Roads in the United States: the Early Experience of Virginia and California," December 1991, authored by Jose A. Gomez-Ibanez and John R. Meyer, of the Taubman Center at Harvard University. Much of the following discussion is drawn from this report.

Establishment and Evolution

Historical Development

In the 1950s and 1960s the federal government and most states were actively expanding their highway systems, especially in light of the commitment the federal government had made to the development of the interstate highway system. As more roads were constructed, they merely seemed to keep up the proliferation of vehicles and the redistribution of the population to suburban and bedroom communities. However, in the 1970s highway construction slowed somewhat due to the effect of community and environmental groups that became more concerned about the impact of additional road development in their neighborhoods. The slowdown was exacerbated by the growing anti-taxation sentiment and the reluctance to fund new highway construction through bond issues, gasoline taxes or general taxes.

Traffic congestion has continued to increase, particularly in California with its expansive highway network and large suburbia clusters, and the need for relief is becoming more pressing. California's county and local officials began to use new sources of highway revenues, such as charging real estate developers impact fees to help finance the local roads necessary to accommodate the new housing projects or special sales taxes that were in addition to the normal gas taxes. The latter approach became politically complicated since additional revenues from sales taxes had to be shared with other activities, such as education, so the effect on highway revenues was diluted.

Relief from the traffic congestion can come from (1) more roads in strategic locations, (2) more innovative technology in the existing and new roads or (3) fewer vehicles, at least on the most impacted roads. The last alternative is not likely in light of the lack of adequate alternative transportation and the dependence on vehicles for conducting business, whether delivering products or providing services. Caltrans feels that it has developed a program that encourages both the construction of more roads to meet the greatest needs and the incentives to implement innovative technologies.

In 1988, Robert K. Best was appointed the Director of Caltrans, and he promptly selected Carl B. Williams as his assistant director with primary responsibility for developing funding sources for highway development, especially through privatization projects. There had been considerable discussion about privatization of various types of governmental services, but little attention had been given to highway construction. Private ownership and operation of roads had been proposed in California, but mere were

difficulties in getting government approvals and there were uncertainties about financial viability. Additional public toll roads were also being contemplated, but there were concerns about resistance by the general public and the state's ability to fund the projects. However, at this point Caltrans had not considered private toll roads.

Several innovative approaches were presented by Robert W. Poole, Jr., in a May 1988 report entitled "Private Tollways: Resolving Gridlock in Southern California." Poole advocated "congestion pricing to dampen peak hour demand, private toll roads to provide additional capacity, and automatic vehicle identification and electronic toll collection to make tolling less inconvenient for motorists." Messrs. Best and Williams reviewed the report and eventually met with Poole for more information. The ideas became more appealing to Best and Williams in light of the likely constraint on Caltrans' ability to fund the needed highway construction projects.

Legal and Institutional Problems

Legislation

To proceed with the highway privatization program, it was necessary to pass state legislation that gave Caltrans the authority to enter into the type of franchise agreement that was being considered. The legislation was Assembly Bill 680 which was carefully crafted, thoroughly debated, substantially revised, eventually passed and subsequently challenged again at the local level through law suits and local interest groups. However, there were several basic parameters that were set. The projects would have to supplement existing state transportation facilities so that users would always have an alternative to the private project. In addition, while private parties would build and operate the facilities, they would be owned by the state at all times, in order to reduce the liability risks for the private companies. The private facilities would have to be self supporting, with no state or federal funds involved, so the private operator would be allowed to impose tolls at a market level and achieve a reasonable return on investment. Beyond these basic parameters, Caltrans had considerable flexibility. This approach, including the legislation, allowed Caltrans to bypass some other agencies that would normally be involved in this type of project, such as the Public Utility Commission.

Since ITS will involve multiple jurisdictions, technology participants, service providers and end users, it will need legislation at the state or federal level that would create the authority to proceed with the multi-faceted project. Legislation will be difficult and time-consuming but will be absolutely necessary before specifications and standards can be prepared, working groups authorized to proceed and investors willing to put money at risk. The type of ownership and organization proposed will influence the details of the legislation, the level of flexibility and the authority of the working group responsible for developing ITS for the specified area.

Selection Process

Caltrans needed to move quickly after the legislation was passed and before the new administration and legislature were in place. Accordingly, Caltrans implemented a four-step process of issuing an RFQ and selecting qualified companies, issuing an RFP to the qualified companies and selecting the four best projects, negotiating the franchise agreements with the selected parties and joining with the selected parties in completing the environmental review process and right-of-way acquisition.

Evaluation criteria and their individual weighting were provided to the interested parties to guide them in their proposals, as follows:

1. Transportation services provided	20 points
2. Encourages economic prosperity and makes good business sense	10
3. Degree of local support	15
4. Ease of implementation	15
5. Experience and expertise of the proposer	10
6. Environmental quality and energy conservation	10
7. Non-toll revenue support	5
8. Degree of technical innovation	10
9. Civil rights objectives	10
Total	110 points

Financial Perspective

There was considerable confusion by Caltrans and the proposers about the what constituted a reasonable return investment and how it should be calculated. Eventually, Caltrans retained Price Waterhouse to develop the model for identifying the financial criteria, preparing the formulas, evaluating the proposals and assisting Caltrans and the proposers during the process. In Public Works Financing, January 1991, Steven A. Steckler, senior manager of Price Waterhouse's infrastructure privatization group, indicated some of the lessons he learned during the three-month period of assisting in the franchising negotiations. He stated that people who do engineering and construction have a lot to learn about how to develop a business, especially the risk aspects. Conversely, real estate developers who want to provide infrastructure have a lot to learn about dealing with the government. Contractors who normally construct infrastructure must realize that private developers who are developing infrastructure cannot provide the protection of a government entity. Investment bankers must learn to think in terms of revenue streams, risks and project feasibility instead of merely the condition of the capital markets at a point in time. Policy risks are greater in this type of project than business risks due to the risk of subsequent changes in laws or regulations mat can impact the project viability.

Since most of the technical and operating specifications had been discussed prior to the final selection, much of the effort during the franchising negotiations was in creating an agreement that was "bankable" with large private financial markets. Most of the parties involved in the franchise negotiations were accustomed to dealing with infrastructure construction in the normal manner, rather than the new approach, which complicated the process somewhat.

If private parties are expected to provide funding for ITS projects, the "bankable" aspect of a project becomes an even more critical factor. The AB 680 projects are very important to California's transportation program, but they were purposely selected as alternatives to existing roadways so that the state would not become dependent on private roads. ITS may not have the same characteristics. There are currently various methods of assembling and distributing traffic information, such as radio, television and telephone, but it appears that ITS systems will be creating a new level, even a new approach, to traffic information and management that will have no fully competitive alternative. Accordingly, after me ITS system is in place in a market, the franchisor cannot afford to merely let the market forces take their

course if it appears that the ITS system may not financially survive, since there will be no alternative to provide the services. Accordingly, it is important that the terms and conditions of the legislation and franchise enable the project to be feasible and “bankable.”

Separate and Distinct Agreements

Each of the four Caltrans franchise agreements were unique, but they had certain provisions that were common to all of them. Caltrans agreed to assume the normal tort liability for accidents and fatalities and agreed to compensate the developers if the state legislature, state agency or the state's voters passed any laws or implemented regulations that substantially decreased the value of the developer's franchise rights, while all other risks would be assumed by the developers. Caltrans promised not to build a competing transportation facility and to try to persuade other federal, state and local agencies from doing so. The franchisees were given the right to lease state-owned land or air space associated with the franchise in order to develop additional revenue sources. Finally, and most importantly, the franchisees were limited in their user fees only by the maximum allowable rates of return on their investments, including incentive returns for achieving specified performance goals.

Challenges to Selections

Subsequent to the completion of the franchise negotiations, there were considerable political challenges to AB 680 by the opposition party, especially from those areas in which the four projects were planned. There were fears of creating a two-class transportation system. There were also complaints about procedural issues since some people felt that essential agencies and decisionmaking bodies had been excluded from the selection and negotiation process. Several lawsuits were also filed, mostly from environmental groups.

Lawsuits should be expected if ITS franchises are granted, most likely by current providers of a similar service that are threatened by the new services and by local governments and activist groups that feel their rights and privileges are being affected by the development of ITS. If the bidding process has been thorough and open, many of the issues under dispute would have already been addressed in public hearings and public documents.

Legal and political objections have contributed to holding up the implementation of the Caltrans projects, although the project for State Route 91 Median Improvements is apparently clear to launch construction. One of the primary effects of the objections is the delay in arranging funding for the projects, causing anxiety among the potential financing sources about the uncertainty of changes in the laws and regulations in the future that would jeopardize the viability of the projects.

State Route 91 Franchise Agreement

The Amended and Restated Development Franchise Agreement for State Route 91 Median Improvements in Orange and Riverside Counties, California, was effective as of July 16, 1993. The agreement was between the State of California Department of Transportation and California Private Transportation Company, L.P., which is a consortium Kiewit SR 91 Corp. and numerous companies for construction, support services, investment, insurance and high technology equipment. The franchise document is similar to other franchises and has most of the same components, including the following:

- Franchise terms
- Grant of franchise
- Exclusivity of rights
- Franchise fees
- Lease and extension options
- Term of agreements
- Reports
- Opinion of Caltrans Chief Counsel
- CPTC (California Private Transportation Corp.) Property
- Private Transportation Project Implementation
- Modifications
- Operations and Maintenance
- Finance.

Conclusions

The October 1990 issue of Public Works Financing indicates that AB 680 is an important model for those seeking innovative public-private relationships. It presents a test of an ad hoc contractual approach to toll rates rather than a public utility approach. It also proposes a build-transfer-operate project rather than a build-operate-transfer project that is used in European road projects. It tests the state's level of influence on the design and operation of a project in which the private company provides the funding and has an exclusive operating franchise. It also has greater risks and rewards for the private company than most other privatization approaches.

The hope of transportation privatization similar to AB 680 is the increase in funding for highway construction and the implementation of innovative technology and operations. This hope may be impacted by the fact that most of the attractive opportunities, i.e. most economically feasible, have already been constructed and potential resistance to toll roads is likely to be considerable in many situations. However, the magnitude of the need is such that there will be acceptable opportunities for private toll roads.

PRIVATE-PUBLIC PROVISION OF ATMS

The experience of cable, cellular and other industries with government franchising or licensing processes indicates that the extent to which the underlying product characteristics fit public good or private good definitions determines, in part, the respective roles of governments and private firms. The following matrix categorizes public-private roles into four cases, recognizing that the other possibilities could fall along the spectrum bounded by Case I and Case IV.

ATMS Public-Private matrix

CASE	I	II	III	IV
Economic characteristics	Public good	Quasi-public good	Private good, externalities	Private good
ATMS franchisee functions	None/n.a.	1. Operations	2. Design 3. Management 4. Operation	5. Design 6. Construction 7. Management 8. Operations
Total revenue to ATMS franchisee	None/n.a.	Marginal costs	Marginal costs plus profit	Average costs plus profit
Government functions	9. Design 10. Construction 11. Management 12. Operations	13. Design 14. Construction 15. Management	Construction	None
Public-private arrangement	Government service	Government contractor	Infrastructure usage	Private ownership

The extent to which the outputs of ATMS are public goods influences the public-private relationship in developing and operating ATMS. Insofar as the benefits of ATMS cannot be captured effectively by fees charged for use of those benefits, private firms will be unwilling to invest in ATMS and the burden of contracting for and financing all or part of ATMS will fall on governments. Conversely, if ATMS generates data and other services for which compensatory fees can be charged, governments' role can be minimized and private firms can be expected to take the risks and gain the rewards of providing ATMS.

ATMS as a public good (Case I) implies that most consumers will be unwilling to make compensatory payments to ATMS/ATIS providers, and that indirect means of generating revenue for ATIS are not effective. American radio and television broadcasting industries illustrate that a public good, such as broadcast programming, need not generate revenue directly from users, if a third-party industry (advertisers) is more than willing to pay for access to those users, but it is not clear which existing or anticipated industries would be willing to pay for the rights to data and other services produced by ATMS or for access to ATMS/ATIS users.

In the public good case, governments would contract for and finance the design, construction, management and operations of ATMS, and the data, services and benefits generated by ATMS would be provided at no cost to users. Compulsory user fees could be used to finance ATMS.

If some but not all of the benefits of ATMS can be captured as user-fee payments, the situation is referred to as a quasi-public good (case II). In this case, governments would retain the financial responsibilities and risks of Case I by designing, constructing and managing ATMS, but the government would license a private firm to operate ATMS. The licensee would obtain revenue from user fees or other

revenue generating outputs of ATMS. up to the marginal costs of operating ATMS. If it is anticipated that ATMS revenues will exceed marginal costs, the licensee would pay the government license fees; If it is anticipated that ATMS marginal costs will exceed revenue, the licensee would receive government subsidies,

Case III implies that users of ATMS/ATIS services will be charged, directly or indirectly, for the information. and that total fee payments will exceed marginal costs of providing ATMS. In addition, ATMS will generate positive highway user externalities that cannot be captured as revenues by ATMS providers: for example, fewer accidents and less traffic congestion.

In this case, governments would be responsible for construction of ATMS. and private firms would be granted fixed-term usage rights to the infrastructure. Insofar as anticipated fee payments generated by ATMS exceed marginal costs and a reasonable profit for the private ATMS provider, the private provider should pay infrastructure usage fees to the government. Otherwise, infrastructure usage would be granted to the ATMS provider with certain requirements for providing the services.

Case IV would be applicable if ATMS corresponded to essentially private goods and services, such as cable television. Private firms would design, construct, manage and operate ATMS, assume all financial responsibilities, and earn whatever profits are generated by ATMS services. Governments' role would be limited to franchising or licensing functions.

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