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UNITED STATES-JAPAN COOPERATION IN HIGH-SPEED PASSENGER RAIL SERVICE

HEARING

BEFORE THE

JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES

NINETY-SEVENTH CONGRESS

FIRST SESSION

NOVEMBER 4, 1981

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE
90-751 O WASHINGTON : 1982

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UNITED STATES-JAPAN COOPERATION IN HIGH-SPEED PASSENGER RAIL SERVICE

WEDNESDAY, NOVEMBER 4, 1981

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 3 p.m., in room 2318, Rayburn House Office Building, Hon. Henry S. Reuss (chairman of the committee) presiding.

Present: Representatives Reuss, Richmond, Madigan, and Benjamin; and Senator Durenberger.

Also present: James K. Galbraith, executive director; Louis C. Krauthoff II, assistant director; Mary E. Eccles and William Keyes, professional staff members; and John D. Kupper, staff assistant to Representative Reuss.

OPENING STATEMENT OF REPRESENTATIVE REUSS, CHAIRMAN

Representative REUSS. Good afternoon. The Joint Economic Committee will be in order for its hearing on United States-Japanese cooperation in high-speed passenger rail service.

This is a glorious occasion; 127 years after Commodore Perry first introduced the concept of railroads to Japan, we have before the Joint Economic Committee today a Commodore Perry in reverse, the United States-Japanese Rail Congress.

We look to you gentlemen, whom we heartily welcome, to describe for us the magnificent success of the Japanese in developing high-speed passenger rail service and to show us the way to bring such service to the United States.

One of our great American planners, Frederick Law Olmstead, exhorted us, "Make no little plans." This is exactly the spirit in which we approach this undertaking today.

The Joint Economic Committee, in a bipartisan report which we issued today, has recommended that there be established a national objective of bringing high-speed passenger rail service to at least the 20 most densely populated corridors in our country. This is thinking big, as big as the Moon shot or the Interstate Highway System. This kind of big thinking is precisely what we need today to revitalize American transportation, to save energy, and to create new industry and new jobs for American workers.

The centerpiece of our approach is public-private cooperation. We need, in the United States today, an entirely new relationship between business, labor, and government.

In this, you Japanese are experts. For 30 years, Japan has shown the world how a spirit of public and of private cooperation can overcome wartime destruction, dependence on imported raw materials, and a backward infrastructure, to emerge as the world's premier industrial power.

They did this, as our friends from Japan will testify, in part by studying and adapting the ideas of American management that our theorists brought to the Japanese situation.

It is our turn now to relearn from the Japanese how severe economic difficulties can be overcome by cooperative effort.

High-speed passenger rail service is the project which can show us the way. The development of high-speed passenger rail for the United States must also be a transnational effort. We must supply the labor, the raw materials, the heavy capital equipment, and the national commitment to get the job done.

But from our friends, the Japanese, we ask for technical advice, for managerial guidance, and for a national education effort to help us persuade the American people that the job can be done. But we need more than that.

Japan, with its succulent trade surpluses, is awash in financial capital. What better outlook for that capital and for the expertise, energy, and the managerial talent which it represents than a direct Japanese effort to bring the Shinkansen back across the Pacific, just as its lowly ancestor the steam engine was once brought to Japan in an American ship by Commodore Perry more than a century ago.

Nature abhors a vacuum. The Japan-United States Rail Congress, in collaboration with the Joint Economic Committee, with Amtrak, and with men and women of good will in both our countries, will try to fill the vacuum, that the absence of a commitment to high-speed passenger rail service has created in the United States, alone among the major industrial powers.

Gentlemen of the Japanese Diet, to join in welcoming you, we have two of the brightest stars in our American Diet, the United States Congress. I'm very proud to present to the Joint Committee and to our Japanese friends a bipartisan and bicameral team of Congressman Adam Benjamin of Indiana, chairman of the Appropriations Transportation Subcommittee, and Senator David Durenberger of Minnesota, a neighbor and friend of mine, who is doing great things over in the United States Senate.

Congressman Benjamin, Senator Durenberger, you both have prepared statements, which will be admitted into the record and, without objection, will be included in full.

Would you now each proceed in your own way to join in welcoming—I see Congressman Madigan, who is a real leader in all forms of transportation, particularly rail, to be an honorary ex officio member of this great committee.

All right, Senator Durenberger, please proceed.

STATEMENT OF HON. DAVID F. DURENBERGER, A U.S. SENATOR FROM THE STATE OF MINNESOTA

Senator DURENBERGER. Thank you very much, Mr. Chairman. I'm pleased to have the opportunity to be here and congratulate you on your interest in the future of rail transportation and rebuilding the economy of America.

I do have a prepared statement, and I'm pleased that it will be made part of the record.

I'd start by making the observation that during the first week in February of this year, I had the opportunity to spend a week in Japan, my first visit to that country, and it was a memorable visit. But as a Republican Senator, I took the occasion to forecast to the political leadership and governmental leadership in Japan what the election of a new administration and a Republican majority in the United States Senate might mean to the economy of this country and the world.

I talked about the commitment to supply-side economics, the commitment to tax reform, and the commitment to redefine federalism in this country. And then at every opportunity, particularly including my opportunities with members of the Diet and with the Kadonran, I talked about the infrastructure in America, the fact that often overlooked in the analysis of economic recovery in this country was the deteriorated condition of the basic infrastructure of the American continent, as well as the American economy.

The steel industry's condition is well known. Our energy condition is not as well known as some people would like to think, nor is it under control. But in particular, the condition of transportation in this country has deteriorated to the point where substantial and imaginative coordinated investment by both the public and private sector are essential to the economic stability of this country. And I shared that with my Japanese friends.

I would like to speak briefly to you today, Mr. Chairman, about the American passenger train and its future.

Four decades ago, when I was growing up in rural Minnesota, the passenger train was our principal link to the rest of the Nation and the world. It carried us, as children, to school. It took us a couple of times a year into the big city to see how everybody else lived. It carried our families on that longer—for occasional holiday out of our immediate environment. And at least twice in my adolescence it carried our fathers, our sons, and our brothers to war.

So, growing up in those times, it was difficult to lose sight of the fact that railroads had shaped the face of America and, in particular, had shaped the face of the Upper Midwest and the Western part of this country.

Passenger trains seemed one of those few immutables that would always be there to tie in our present, our past, and in our future. Unfortunately, history told a different tale. The passenger train came under relentless pressure from new forms of transportation, the automobile with its independence, the airplane with its ability to cross great distances in short periods of time—all of these competitors relying on facilities built and maintained partially or completely with Government-imposed taxes and fees in our rush to catch up with this new modern form of transportation.

So, rail ridership fell, costs grew, service declined, and passenger trains fell prey to an increasing economic squeeze.

In 1971, the Congress of the United States reacted wisely by recreating a commitment to a national passenger rail system called Amtrak. This year Amtrak celebrated its 10th anniversary, and it was time to look back.

Amtrak has survived a decade of vacillating congressional and public commitment. It has completed a crucial capital investment program. Better equipment has brought better service.

Amtrak, despite the jokes, now has an on-time record that equals or surpasses any other mode of transportation in this country. Equally important, it has begun to market aggressively. And with better marketing service and equipment, riders have returned in record numbers.

All of this simply goes to illustrate that the demand for train service has always been there in this country. The problem has been the inability, first of private industry and then of the Amtrak system, to afford the kind of service necessary to meet that demand.

I think, Mr. Chairman, that we are at the point where we have finally abandoned the theory that government's primary role in transportation is to build intermodal competition. That theory played a significant role in restricting the growth of the American rail industry. The Congress shackled the industry in regulation as it embraced and then abandoned each new form of transportation with all the constancy of a child fascinated by new toys.

As you know, we first poured money into highways, then moved from highways and made significant investments in national air systems. We then moved from that to our policy support for mass transit systems. The result has been a patchwork of differential subsidies and a national transportation system without coordination.

There are clearly better ways to approach the subject of energy-efficient people movement. And I think we've begun to move in more positive directions.

This afternoon's hearing, Mr. Chairman, is testimony to our common belief that rail passenger service has a strong future. Those of us who have the privilege of serving in government have a special responsibility to maximize that future.

Today's hearing can play a role in that process, as will the discussions taking place in the next 48 hours between American and Japanese parliamentarians concerned with rail transportation issues.

Let me take just a moment to initiate that process by pointing out three areas where Congress must change its approach. If the potential we all see in the future of rail transportation is to be maximized, first, Mr. Chairman, it is essential that Congress stop its practice of redebating Amtrak's existence on an annual basis.

Congress made a decision to create this system 10 years ago. This decision has been reaffirmed in every succeeding year, and these annual debates do nothing but undermine efforts to build confidence in the public in our rail passenger system.

Second, we need to provide our rail passenger system with a stable and predictable source of capital funding. Congress annual vacillation over commitment to capital funding makes it impossible for Amtrak to plan any efficient, long-term investment program.

Finally, and perhaps most important, we need to follow the leadership of our friends, the Japanese, in allowing Amtrak to produce its own capital funds through commercial development of its invaluable technological and real estate holdings.

It must be permitted to continue aggressively pursuing opportunities to turn these valuable properties into moneymakers.

If these opportunities are adequately developed. Amtrak's system will meet the future funding needs, while the trains continue to cover their own operating costs.

If we can accomplish these ends, Mr. Chairman, the American passenger train will truly have come full circle in our brief lifetimes. I am convinced, Mr. Chairman, that it can be done.

I want to leave you with the following thoughts from our friend, Mr. Neil Pierce, who observes America from a slightly different perspective than we on why it should be done: "The rails belong to America. They carry us over routes by which many of our ancestors first discovered and then traveled this land. They are a national treasure, just like our national parks. Like parks, they require a degree of subsidy. To run them inefficiently is intolerable. To extinguish them would be unthinkable."

And I thank you, Mr. Chairman. It has been a pleasure to appear before the committee this afternoon.

Representative REUSS. Thank you, Senator, for your excellent statement and for your leadership in bringing the Japan-United States Rail Congress into being.

[The prepared statement of Senator Durenberger follows:]

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PREPARED STATEMENT OF HON. DAVID F. DURENBERGER

MR. CHAIRMAN. THE AMERICAN PASSENGER TRAIN HAS COME FULL CIRCLE IN OUR LIFETIMES.

FOUR DECADES AGO, WHEN I WAS GROWING UP IN RURAL MINNESOTA, THE PASSENGER TRAIN WAS OUR PRINCIPAL LINK TO THE REST OF THE NATION AND THE WORLD. IT CARRIED OUR CHILDREN TO SCHOOLS AND TO "THE BIG CITY"; IT CARRIED OUR FAMILIES TOGETHER ON HOLIDAYS; IT CARRIED OUR SONS AND OUR BROTHERS TO WAR. GROWING UP IN THOSE TIMES, IT WAS DIFFICULT TO LOSE SIGHT OF THE FACT THAT RAILROADS HAD SHAPED THE FACE OF MINNESOTA AND MUCH OF THE NATION, AS TOWNS SPRANG UP ALONG KEY LINES AND JUNCTIONS. THE PASSENGER TRAIN SEEMED ONE OF THOSE FEW "IMMUTABLES" THAT WOULD ALWAYS BE THERE TO TIE THE PRESENT TO OUR PAST AND TO OUR FUTURE.

UNFORTUNATELY, HISTORY TOLD A DIFFERENT TALE. THE PASSENGER TRAIN CAME UNDER RELENTLESS PRESSURE FROM NEW FORMS OF

TRANSPORTATION -- THE AUTOMOBILE, WITH ITS INDEPENDENCE; THE AIRPLANE, WITH ITS ABILITY TO CROSS GREAT DISTANCES IN SHORT PERIODS OF TIME. ALL OF THESE COMPETITORS RELIED ON FACILITIES BUILT AND MAINTAINED PARTIALLY OR COMPLETELY WITH GOVERNMENT IMPOSED TAXES AND FEES. AS RAIL RIDERSHIP FELL, COSTS GREW, AND IN THE FACE OF AN ICC SLOW TO MAKE ROUTING DECISIONS, SERVICE DECLINED AS PASSENGER TRAINS FELL PREY TO AN INCEASING ECONOMIC SQUEEZE. RIDERSHIP FELL BY MORE THAN 70 PERCENT BETWEEN 1930 AND 1971. FACED WITH THE COMPLETE COLLAPSE OF THE NATION'S PASSENGER SYSTEM, CONGRESS ACTED IN 1971 TO MERGE EXISTING LINES INTO A SINGLE NATIONAL SYSTEM -- AMTRAK.

AMTRAK CELEBRATED ITS TENTH ANNIVERSARY THIS YEAR, AND IT CERTAINLY HAD SOME YEARS OF STRUGGLE TO LOOK BACK ON. PLAGUED WITH ANTIQUATED EQUIPMENT, TREMENDOUS ACQUISITION DEBTS, CONFLICTING POLITICAL DIRECTIVES AND CONTINUANCE OF PUBLICLY SUBSIDIZED COMPETITION, AMTRAK INITIALLY HAD NO MORE SUCCESS THAN ITS PRIVATE SECTOR PREDECESSORS IN HOLDING THE AMERICAN TRANSPORTATION DOLLAR. BUT THE EXPERIENCE OF THE LAST THREE YEARS HAS ILLUSTRATED THAT THE PROBLEMS OF THE EARLY 1960'S WERE NEITHER PERMANENT NOR INHERENT. AMTRAK HAS SURVIVED A DECADE OF VACILLATING CONGRESSIONAL COMMITMENT. IT HAS COMPLETED A CAPTIAL INVESTMENT PROGRAM THAT HAS RECONDITIONED EVERY ONE OF THE STEAM-HEATED CARS IT INHERITED TO MODERN, HEAD AND ELECTRIC HEATED VEHICLES. FOUR HUNDRED DOUBLE-DECKER "SUPERLINERS" ARE NOW IN SERVICE, AND THE BELOVED BUT ANTIQUATED 661S HAVE BEEN REPLACED WITH MODERN DIESEL EQUIPMENT. THE AMTRAK LOCOMOTIVE

FLEET -- WHICH AVERAGED 22 YEARS OF AGE IN 1972 -- NOW AVERAGES ONLY 6 YEARS OF AGE.

BETTER EQUIPMENT HAS BROUGHT BETTER SERVICE, AND AMTRAK NOW HAS AN ON-TIME RECORD THAT EQUALS OR SURPASSES ANY OTHER MODE OF TRANSPORTATION. EQUALLY IMPORTANT, AMTRAK HAS NOW BEGUN TO MARKET AGRESSIVELY. WITH BETTER MARKETING, SERVICE AND EQUIPMENT, RIDERS HAVE RETURNED -- AND RETURNED IN RECORD NUMBERS. RIDERSHIP HAS GROWN STEADILY FROM THE GAS CRISIS OF 1979 TO THE PRESENT -- DESPITE DECREASES IN THE NUMBER OF TRAINS RUN AND CITIES SERVED. THE PREDICTION OF MANY CRITICS THAT RIDERSHIP WOULD FALL AS SOON AS THE GAS LINES DISAPPEARED HAS PROVEN TO BE FALSE PROPHECY. IT INCREASED -- EVEN FASTER THAN BEFORE. IN FACT, RAIL PASSENGER TRANSPORTATION WAS THE ONLY FORM OF PASSENGER TRANSPORTATION TO INCREASE ITS RIDERSHIP LAST YEAR.

ALL OF THIS SIMPLY GOES TO ILLUSTRATE THAT THE DEMAND FOR TRAIN SERVICE HAS ALWAYS BEEN THERE. THE PROBLEM HAS BEEN THE INABILITY FIRST OF PRIVATE INDUSTRY AND THEN OF THE AMTRAK SYSTEM TO AFFORD THE KIND OF SERVICE NECESSARY TO MEET THAT DEMAND.

EVEN THROUGH THE WORST OF TIMES, A SUBSTANTIAL CORE OF THE AMERICAN PEOPLE HAS USED THE PASSENGER TRAIN AS THEIR PRIMARY MODE OF TRANSPORTATION. IN THE 525 COMMUNITIES WHERE IT OPERATES,

AMTRAK CONTINUES TO CARRY A STEADILY INCREASING 18 TO 22 PERCENT OF ALL INTERCITY MASS TRANSPORTATION RIDERS -- MORE THAN 21 MILLION PEOPLE. THIS IS A SOLID BASE TO BUILD FROM, AND DEVELOPMENTS IN RECENT MONTHS PROVIDE GOOD REASON TO BELIEVE THAT RIDERSHIP WILL CONTINUE TO BUILD.

- RISING FUEL COSTS HAVE DRAMATICALLY INCREASED FARES ON COMPETING FORMS OF TRANSPORTATION, PARTICULARLY AIR TRANSPORTATION. THESE COSTS HAVE ALSO FORCED ABANDONMENT OF SCHEDULED AIR SERVICE ON CERTAIN PORTIONS OF AMTRAK'S SHORT- AND MEDIUM-HAUL ROUTES. THE AIRLINES' AVERAGE TRIP LENGTH IS 1,000 MILES AND RISING. THE BUSES' AVERAGE TRIP LENGTH IS SLIGHTLY OVER 100 MILES AND FALLING. THAT VAST AND EXPANDING MIDDLE GROUND, TRIPS OF 100 TO 400 MILES IS THE NATURAL MARKET FOR AMTRAK GROWTH.

- AS AUTOMOBILES HAVE BECOME SMALLER, THEY HAVE BECOME PROGRESSIVELY LESS COMFORTABLE FOR LONG FAMILY TRIPS. WITH THE COST OF REPLACEMENT VEHICLES INCREASING RAPIDLY, THE INCENTIVE TO USE MASS TRANSPORTATION FOR LONG DISTANCE TRAVEL IS INCREASING -- AND RIDERSHIP STATISTICS REFLECT THAT FACT.

- NEW EQUIPMENT AND FASTER RUNNING TIMES HAVE MADE AMTRAK COMPETITIVE WITH SHORT-HAUL AIR SERVICE IN MANY PARTS OF THE COUNTRY. AMTRAK CAN NOW MAKE THE RUN FROM DOWNTOWN WASHINGTON'S UNION STATIONS TO DOWNTOWN NEW YORK CITY'S PENN STATION IN 2 HOURS AND 59 MINUTES. IF YOU ADD COMMUTING TIME TO AND FROM OUTLYING AIRPORTS TO AIR TIME, AMTRAK'S "PORTAL-TO-PORTAL" SERVICE IS HIGHLY COMPETITIVE WITH COMMUTER AIR SERVICE. AND WHEN YOU ADD COMMUTING COSTS TO AND FROM THESE AIRPORTS, PASSENGER TRAINS HAVE A SIGNIFICANT PRICE ADVANTAGE AS WELL.

- WE HAVE FINALLY ABANDONED THE THEORY THAT GOVERNMENT'S PRIMARY ROLE IN TRANSPORTATION IS TO BUILD INTERMODAL COMPETITION. THAT THEORY PLAYED A SIGNIFICANT ROLE IN RESTRICTING THE GROWTH OF THE AMERICAN RAIL INDUSTRY, AS CONGRESS SHACKLED THE INDUSTRY IN REGULATION AS IT EMBRACED AND THEN ABANDONED EACH NEW FORM OF TRANSPORTATION WITH ALL THE CONSTANCY OF A CHILD FASCINATED BY NEW TOYS. WE FIRST POURED ALL OF OUR RESOURCES INTO HIGHWAYS; WE THEN MOVED AWAY FROM HIGHWAYS AND MADE SIGNIFICANT INVESTMENTS IN DEVELOPING A NATIONAL AIR SYSTEM. FINALLY, WE TURNED AWAY FROM BOTH AND CONCENTRATED OUR DOLLARS AND POLICY SUPPORT ON MASS TRANSIT SYSTEMS. THE RESULT HAS BEEN A PATCHWORK OF DIFFERENTIAL SUBSIDIES, AND A NATIONAL TRANSPORTATION SYSTEM WITHOUT COORDINATION.

THERE ARE CLEARLY BETTER WAYS TO APPROACH THE SUBJECT OF ENERGY-EFFICIENT PEOPLE MOVEMENT, AND I THINK WE'VE BEGUN TO MOVE IN MORE POSITIVE DIRECTIONS. RATHER THAN MAKING COMPETION THE SOLE OBJECT OF OUR TRANSPORTATION POLICY, WE ARE FINALLY RECOGNIZING THE POTENTIAL OF BUS-TRAIN, AIR-BUS INTERMODAL COOPERATION. AND WE NEED TO MAINTAIN A MIX OF STRONG TRANSPORTATION OPTIONS, SO THAT CONSUMERS CAN CHOOSE THE OPTION THAT BEST MEETS THEIR NEEDS, AND FORCE EFFICIENCY INTO THE SYSTEM THROUGH EXIT AND ENTRY.

- FINALLY, NO TECHNOLOGICAL DEVELOPMENT HAS YET EXCEEDED THE ENERGY EFFICIENCY OF THE STEEL WHEEL ON THE STEEL RAIL. A WELL-PATRONIZED PASSENGER TRAIN CONTINUES TO BE THE MOST ENERGY-EFFICIENT FORM OF MASS TRANSPORTATION. THAT FACT -- ALONG WITH A STEADY DETERIORATION OF THE NATION'S BRIDGES AND HIGHWAYS -- PROVIDES A STRONG PUBLIC POLICY INCENTIVE FOR SUPPORTING THE REBIRTH OF THE AMERICAN PASSENGER TRAIN SYSTEM.

THIS AFTERNOON'S HEARING IS TESTIMONY TO OUR COMMON BELIEF THAT RAIL PASSENGER SERVICE HAS A STRONG FUTURE. THOSE OF US WHO HAVE THE PRIVILEGE OF SERVING IN GOVERNMENT HAVE A SPECIAL RESPONSIBILITY TO MAXIMIZE THAT FUTURE. TODAY'S HEARING CAN PLAY A

ROLE IN THAT PROCESS, AS WILL THE DISCUSSIONS TAKING PLACE IN THE NEXT 48 HOURS BETWEEN AMERICAN AND JAPANESE LEGISLATORS CONCERNED WITH RAIL TRANSPORTATION ISSUES. MR. CHAIRMAN, LET ME TAKE A MOMENT TO INITIATE THAT PROCESS BY POINTING OUT THREE AREAS WHERE CONGRESS MUST CHANGE ITS APPROACH IF THE POTENTIAL WE ALL SEE IN THE FUTURE OF RAIL PASSENGER TRANSPORTATION IS TO BE MAXIMIZED.

FIRST, MR. CHAIRMAN, IT IS ESSENTIAL THAT CONGRESS STOP ITS PRACTICE OF RE-DEBATING AMTRAK'S VERY EXISTENCE ON AN ANNUAL BASIS. CONGRESS MADE A DECISION TO CREATE THIS SYSTEM TEN YEARS AGO, AND IT'S A DECISION WE'VE REAFFIRMED IN EVERY SUCCEEDING YEAR. THESE ANNUAL DEBATES DRAIN THE TIME OF AMTRAK MANAGEMENT, AND UNDERMINE EFFORTS TO BUILD PUBLIC CONFIDENCE IN THE RAIL PASSENGER SYSTEM. FOR OBVIOUS REASONS, THEY MAKE IT FAR MORE DIFFICULT TO ATTRACT PRIVATE CAPITAL FOR DEVELOPMENT OF AMTRAK'S PROPERTY AND FACILITIES. THE NATIONAL RAIL PASSENGER SYSTEM HAS SURVIVED THESE ANNUAL BATTLES FOR THE SAME REASON IT WILL CONTINUE TO SURVIVE--THE PUBLIC WANTS IT, PLAIN AND SIMPLE. IT'S TIME WE RECOGNIZE THAT FACT, AND CONCENTRATE OUR ENERGY ON MAXIMIZING OUR INVESTMENT. WE NEED TO STOP USING POLITICAL RHETORIC TO UNDERMINE THE MILLIONS OF DOLLARS WE'VE SPENT TO MARKET THAT SAME SYSTEM.

SECOND, WE NEED TO PROVIDE OUR RAIL PASSENGER SYSTEM WITH A STABLE AND PREDICTABLE SOURCE OF CAPITAL FUNDING. CONGRESS'

ANNUAL VACILLATION OVER COMMITMENT TO CAPITAL FUNDING HAS MADE IT IMPOSSIBLE FOR AMTRAK TO PLAN ANY EFFICIENT, LONG-TERM INVESTMENT PROGRAM. THIS PRACTICE HAS COST TAXPAYERS DEARLY BY PREVENTING AMTRAK FROM PURSUING THE MOST EFFECTIVE INVESTMENT STRATEGY. IN ADDITION, BY DELAYING EQUIPMENT DELIVERY, UNCERTAIN CAPITAL FUNDING HAS FORCED COST OVERRUNS AND IMPEDED THE MODERNIZATION OF THE SYSTEM. IT IS ESSENTIAL THAT WE GIVE AMTRAK A MEANINGFUL CAPITAL FUNDING COMMITMENT, AND IT IS CERTAINLY ESSENTIAL THAT WE HONOR THAT COMMITMENT. IN THE SHORT-RUN THIS CERTAINTY CAN ONLY COME FROM CONGRESSIONAL RESOLVE TO STICK WITH THE AUTHORIZATION DECISIONS MADE EARLIER THIS YEAR. IN THE LONGER RUN, WE NEED TO ESTABLISH SOME FORM OF TRUST FUND OR ADVANCED FUNDING MECHANISM. BEAR IN MIND THAT IF CURRENT TRENDS CONTINUE, EVERY TRAIN IN THE AMTRAK SYSTEM WILL MEET OR EXCEED ITS OPERATING COSTS BY 1985. THE ONLY REMAINING FEDERAL COMMITMENT WILL BE TO INFRASTRUCTURAL FUNDING, AND WE ARE WASTING FEDERAL DOLLARS IF WE CANNOT MAKE THAT COMMITMENT IN A FIRM AND PREDICTABLE MANNER.

FINALLY AND PERHAPS MOST IMPORTANT, WE NEED TO FOLLOW THE LEADERSHIP OF THE JAPANESE IN ALLOWING AMTRAK TO PRODUCE ITS OWN CAPITAL FUNDS THROUGH COMMERCIAL DEVELOPMENT OF ITS INVALUABLE TECHNOLOGICAL AND REAL ESTATE HOLDINGS. AMTRAK OWNS 632 MILES OF TRACK, SOME 2,000 ACRES OF ADJACENT LAND, AND 91 STATIONS AND TERMINALS. IT MUST BE PERMITTED TO CONTINUE

AGGRESSIVELY PURSUING OPPORTUNITIES TO TURN THESE VALUABLE PROPERTIES INTO MONEYMAKERS.

AMTRAK STARTED THIS PROCESS AT CHICAGO'S UNION STATION, AND IS PRESENTLY PUTTING TOGETHER A MULTIMILLION DOLLAR PACKAGE FOR ITS PHILADELPHIA 30TH STREET STATION. THIS MIXED-USE DEVELOPMENT COULD INCLUDE A HOTEL, MAJOR OFFICE BUILDINGS, RESTAURANTS, SHOPS, AND PARKING. PRIVATE INVESTORS, AS WELL AS THE CITY OF PHILADELPHIA, ARE STRONG PARTNERS IN THIS PROJECT. THE CHICAGO AND PHILADELPHIA PROJECTS SHOULD SERVE AS MODELS FOR THE DEVELOPMENT OF OTHER PROMISING AMTRAK HOLDINGS.

AMTRAK MUST ALSO BE PERMITTED TO USE THE MAINTENANCE FACILITIES AT BEECH GROVE, INDIANA, TO MAINTAIN EQUIPMENT FOR MASS TRANSIT SYSTEMS AND OTHER RAIL CARRIERS. IT MUST BE ENCOURAGED TO MARKET ITS COMPUTER AND RESERVATION SERVICES, AS WELL AS ITS AUTOMATIC TRACK-LAYING EQUIPMENT. WE MUST SUPPORT AMTRAK'S EFFORTS TO ATTRACT A CONSORTIUM OF PRIVATE-INVESTOR USERS TO CONSTRUCT A FIBER OPTICS COMMUNICATION SYSTEM ALONG ITS 600 MILE RIGHT-OF-WAY IN THE NORTHEAST CORRIDOR.

IF THESE OPPORTUNITIES ARE EFFECTIVELY DEVELOPED, AMTRAK'S INVESTMENTS WILL MEET THE SYSTEM'S FUTURE CAPITAL FUNDING NEEDS WHILE THE TRAINS CONTINUE TO COVER THEIR OWN OPERATING COSTS. IN OTHER WORDS, MR. CHAIRMAN, THE GOAL OF A SELF-SUSTAINING

RAIL PASSENGER SYSTEM IS NOT AN OPTIMIST'S MYTH. IT'S A POTENTIAL THAT CAN BE ACHIEVED IN THIS DECADE IF WE HAVE THE COURAGE AND FORESIGHT TO BRIDGE THE GAP BETWEEN THE NEEDS OF TODAY'S RAIL PASSENGER SYSTEM AND ITS POTENTIAL FOR TOMORROW.

IF WE CAN ACCOMPLISH THIS END, THE AMERICAN PASSENGER TRAIN WILL TRULY HAVE COME FULL CIRCLE IN OUR LIFETIME. I'M CONVINCED, MR. CHAIRMAN, THAT IT CAN BE DONE. AND I WANT TO LEAVE YOU WITH THE FOLLOWING THOUGHTS FROM NEIL PIERCE ON WHY IT SHOULD BE DONE.

> "THE RAILS," HE WRITES, "BELONG TO AMERICA. THEY CARRY US OVER ROUTES BY WHICH MANY OF OUR ANCESTORS FIRST DISCOVERED AND THEN TRAVELED THIS LAND. THEY ARE A NATIONAL TREASURE, LIKE NATIONAL PARKS. LIKE PARKS, THEY REQUIRE SUBSIDY. TO RUN THEM INEFFICIENTLY IS INTOLERABLE. TO EXTINGUISH THEM WOULD BE UNTHINKABLE."

THANK YOU MR. CHAIRMAN. IT HAS BEEN A PLEASURE TO APPEAR BEFORE THE COMMITTEE THIS AFTERNOON.

Representative REUSS. The same accolade applies to you, Congressman Benjamin. We are proud of the job that you've done and are happy to serve under your and Senator Durenberger's leadership. It's a very promising new venture, and now we'd like to hear from you, if we may.

STATEMENT OF HON. ADAM BENJAMIN, JR., A U.S. REPRESENTATIVE IN CONGRESS FROM THE FIRST CONGRESSIONAL DISTRICT OF THE STATE OF INDIANA

Representative BENJAMIN. Thank you, Chairman Reuss, and I do want to thank you and the gentleman sitting to your immediate right, Congressman Madigan, for the role that you have assumed, along with Representative Florio, in the preservation of rail transportation in these United States, and more specifically on your leadership in attempting to introduce high speed rail by legislative efforts, numerous hearings of the Joint Economic Committee and edification of the public and legislators on the need for high speed rail transportation. I also salute our distinguished colleague from the other body, Senator Durenberger, and our former colleague, Senator Mark Andrews, for their efforts on behalf and in support of high-speed rail.

I'm delighted to be with you today with the members of the Joint Economic Committee and the distinguished members of the Japanese Diet who are visiting. It's certainly a privilege and an honor to welcome these honored guests from Japan. These 10 members of the Japanese Diet have come to our country for the inaugural meeting of the Japan-United States Rail Congress.

The purpose of the Congress is to enact a resolution and to discuss bullet trains, trade relations, and transfer of technology. It is the hope of all the participants that a successful and productive exchange of ideas between leaders of both countries in the areas of rail transportation will serve as a basis for the identification and resolution of other transportation problems common to our two great nations.

In 1964 the Japanese National Railroad operated its first Shinkansen train—the only train in the world named the "bullet train" because of its record of high speed and accomplishments. For the past 15 years of its 17 years of operation, that bullet train realized a profit, as much as 38 to 54 percent over the past 8 years. It has moved more than 1 billion passengers without a fatality. It is clear from examining the progress of bullet trains in Japan and high speed ground transportation in other countries, that Japan and Europe, unlike the United States, presently have a deep and continuing commitment to good passenger rail service as a national necessity.

The recent developments on rail passenger service have been, at best, very modest in the United States. In the early sixties Senator Claiborne Pell and others persuaded Presidents Kennedy and Johnson to begin restoring train service in the Northeast Corridor. Accordingly, the Department of Commerce established the first Northeast Corridor project. The primary focus at that time was to determine the needs and problems and explore high-speed ground transportation.

Mr. Chairman, I respectfully submit that the rail transportation legislative decisions from 1970 onward, although necessary, were also

very limited in scope. Rather than aggressively continuing to conduct and pursue research and development, to seek new technology enabling the United States passenger rail service to compete with other modes of available transportation, the Federal Government devoted itself to upgrading and developing the Amtrak fleet, as well as undertaking massive track rehabilitation programs. Even a large portion of the research conducted by DOT and FRA was aimed at bringing other technologies to an existing system, realizing track over which both track and freight service must operate.

The prospect of constructing a new system on specified routes along which high speed trains could operate on dedicated track was only partially investigated and made a part of the emerging corridor's program.

Mr. Chairman. I've appeared before your committee previously to state may belief that bullet trains can be operated profitably in selected high-density, high-traveled transportation corridors in these United States. Four corridors have been identified by Amtrak as having similar characteristics to the successful Japanese bullet line: Los Angeles to San Diego; Dallas-Fort Worth to Houston; Miami to Orlando and Tampa; and several routes emerging from Chicago. A well-known Japanese philanthropist and chairman of the Japanese Shipbuilding Industry Foundation recently announced his intents to provide as much as $5 million to the Japanese Railway Technical Service and the Japanese national railways to conduct engineering feasibility studies in the United States. The engineers are part of a team that designed and built the bullet train.

Mr. Chairman, I believe a revitalized rail passenger system will have a direct and immediate impact on the Nation's economy and will assist in the reindustrialization of America. It will give a well-deserved and much needed boost to the steel industry of the Midwest and Northeast. It will build new life into the railroad equipment manufacting industry and provide many new jobs. The economics of the United States is dependent on adequate transportation of goods and people, and we have neglected ground transportation between our cities for the transport of people.

I conclude my remarks with these observations. One, that the House form a rail caucus working independently or in coordination with the Senate, or a congressional joint rail caucus. Two, that the Joint Economic Committee examine and support the cooperation between the United States and Japan and encourage the Japan-United States Rail Congress in its development. Finally, to further encourage this development, that Amtrak and FRA work jointly with Amtrak developing the system and FRA working with Japan and other nations on the technology to achieve the best rapid rail system in the world.

Thank you very much, Mr. Chairman.

[The prepared statement of Representative Benjamin follows:]

PREPARED STATEMENT OF HON. ADAM BENJAMIN, JR.

MR. CHAIRMAN, MEMBERS OF THE JOINT ECONOMIC COMMITTEE AND DISTINGUISHED MEMBERS OF THE JAPANESE DIET, IT IS A PRIVILEGE AND HONOR TO WELCOME OUR HONORABLE GUESTS FROM JAPAN.

THESE TEN MEMBERS OF THE JAPANESE DIET HAVE COME TO OUR COUNTRY FOR THE INAUGURAL MEETING OF THE JAPAN-UNITED STATES RAIL CONGRESS. THE PURPOSE OF THE CONGRESS IS TO ENACT A RESOLUTION AND DISCUSS BULLET TRAINS, TRADE RELATIONS AND TRANSFER OF TECHNOLOGY. IT IS THE HOPE OF ALL THE PARTICIPANTS THAT A SUCCESSFUL AND PRODUCTIVE EXCHANGE OF IDEAS BETWEEN LEADERS OF BOTH COUNTRIES IN AREAS OF RAIL TRANSPORTATION WILL SERVE AS A BASIS FOR THE IDENTIFICATION AND RESOLUTION OF OTHER TRANSPORTATION PROBLEMS COMMON TO THE TWO COUNTRIES.

IN 1964, THE JAPANESE NATIONAL RAILROAD (JNR) OPERATED ITS FIRST SHINKANSEN TRAIN - THE ONLY TRAIN IN THE WORLD NAMED THE "BULLET TRAIN" BECAUSE OF ITS RECORD OF HIGH SPEED AND ACCOMPLISHMENTS. FOR THE PAST 15 OF ITS 17 YEARS OF OPERATION, THE SHINKANSEN REALIZED A PROFIT, WITH AS MUCH AS 38% TO 54% PROFIT OVER THE PAST 8 YEARS. IT HAS MOVED MORE THAN ONE BILLION PASSENGERS WITHOUT A FATALITY.

IT IS CLEAR FROM EXAMINING THE PROGRESS OF BULLET TRAINS IN JAPAN AND HIGH SPEED GROUND TRANSPORTATION IN OTHER COUNTRIES THAT JAPAN AND EUROPE - UNLIKE THE UNITED STATES - PRESENTLY HAVE A DEEP AND CONTINUING COMMITMENT TO GOOD PASSENGER RAIL SERVICE AS A NATIONAL NECESSITY.

THE RECENT DEVELOPMENTS ON RAIL PASSENGER SERVICE HAVE BEEN AT BEST, VERY MODEST IN THE UNITED STATES. IN THE EARLY 1960'S, SENATOR CLAIBORNE PELL AND OTHERS PERSUADED PRESIDENTS KENNEDY AND JOHNSON TO BEGIN RESTORING TRAIN SERVICE IN THE NORTHEAST CORRIDOR. ACCORDINGLY, THE DEPARTMENT OF COMMERCE ESTABLISHED THE FIRST NORTHEAST CORRIDOR PROJECT. THE PRIMARY FOCUS AT THAT TIME WAS TO DETERMINE THE NEEDS AND PROBLEMS AND EXPLORE HIGH SPEED GROUND TRANSPORTATION.

ONE OF THE PROJECT'S FIRST FINDINGS WAS THAT TECHNOLOGY EXISTED FOR NEW SYSTEMS OF HIGH SPEED GROUND TRANSPORTATION BUT THAT RESEARCH AND DEVELOPMENT WAS NECESSARY TO PREDICT THE PERFORMANCE AND ESTIMATE THE COST OF THOSE SYSTEMS.

AT THAT TIME, NO AUTHORITY EXISTED FOR SUCH RESEARCH AND DEVELOPMENT IN TRANSPORTATION BY THE FEDERAL GOVERNMENT. THEREFORE, THE STAFF OF THE NORTHEAST CORRIDOR TRANSPORTATION PROJECT PREPARED A LEGISLATIVE REQUEST TO AUTHORIZE A GROUND TRANSPORTATION RESEARCH AND DEVELOPMENT PROGRAM FOR THE SECRETARY OF COMMERCE.

THE REQUEST RESULTED IN THE PASSAGE OF THE HIGH SPEED GROUND TRANSPORTATION ACT OF 1965. ITS PURPOSE WAS TO DETERMINE WHETHER HIGH SPEED GROUND TRANSPORTATION COULD BE MADE CONVENIENT, ECONOMICAL AND ATTRACTIVE AND MEET THE INCREASING TRANSPORTATION REQUIREMENTS OF THE UNITED STATES.

THE ACT AUTHORIZED THREE ACTIVITIES: RESEARCH INTO AND DEVELOPMENT OF DIFFERENT FORMS OF HIGH SPEED GROUND TRANSPORTATION, DEMONSTRATION PROJECTS TO TEST NEW DEVELOPMENTS AND A NATIONAL PROGRAM TO IMPROVE THE SCOPE AND AVAILABILITY OF TRANSPORTATION STATISTICS.

ALTHOUGH THE ACT USED THE TERM "GROUND TRANSPORTATION" WITHOUT ANY LIMITING LANGUAGE, THE EARLY WORK WAS PASSENGER ORIENTED TO SUPPORT THE NORTHEAST CORRIDOR TRANSPORTATION PROJECT.

TWO CORRIDOR DEMONSTRATION PROJECTS WERE CONDUCTED UNDER THE

1965 ACT: THE WASHINGTON-NEW YORK METROLINER WHICH RAN IN 2 HOURS, 59 MINUTES AND THE GAS-TURBINE POWERED TRAIN (TURBO TRAIN) ON THE NEW YORK- BOSTON ROUTE.

IN 1970, THE RAILROAD PASSENGER SERVICE ACT CONCEIVED AMTRAK. THE CONGRESS DECIDED THAT THE DECLINE OF INTERCITY PASSENGER TRAIN SERVICE IN THE UNITED STATES MUST BE HALTED AND A FEDERAL EFFORT WAS NECESSARY TO ESTABLISH, RETAIN AND REVITALIZE A REALISTIC NATIONAL NETWORK OF RAIL PASSENGER ROUTES.

THE DEPARTMENT OF TRANSPORTATION (DOT) DELIVERED AMTRAK IN EARLY 1971 TO OVERSEE AND MANAGE THE ROUTES. AMTRAK SUBSEQUENTLY BEGAN OPERATIONS A MONTH LATER WITH AN ANTIQUATED FLEET OF CARS INHERITED FROM OTHER RAILROADS.

AT THE SAME TIME, DOT CONTINUED RESEARCH MANDATED UNDER THE 1965 ACT AT ITS TRANSPORTATION TEST CENTER IN PUEBLO, COLORADO. RESEARCH ON MAGNETIC LEVITATION, AIR CUSHION VEHICLES AND LINEAR INDUCTION WAS SUMMARIZED ANNUALLY TO THE CONGRESS FROM 1966 TO 1976.

IN 1973, THE REGIONAL RAIL REORGANIZATION ACT WAS ENACTED. THE 3R ACT DIRECTED DOT TO BEGIN ENGINEERING STUDIES ON THE NORTHEAST CORRIDOR AND EMPOWERED THE UNITED STATES RAILWAY ASSOCIATION (USRA) TO DESIGNATE

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CERTAIN RAIL PROPERTIES FOR ACQUISTION OR LEASE BY AMTRAK. IN ITS "FINAL SYSTEMS PLAN", USRA RECOMMENDED AMTRAK OWNERSHIP OF THE NORTHEAST CORRIDOR.

IN 1973, THE FEDERAL RAILROAD ADMINISTRATION (FRA) ALSO BEGAN ITS IMPROVED PASSENGER TRAIN (IPT) PROGRAM. ITS GOAL WAS TO DEVELOP A PROTOTYPE PASSENGER TRAIN FOR APPLICATION OUTSIDE THE NORTHEAST CORRIDOR WITH PROVISION FOR CONVERTING TO AN ALL-ELECTRIC TRACTION SYSTEM AS OPPOSED TO A TURBINE OR DIESEL-ELECTRIC SYSTEM FOR APPLICATION IN THE NORTHEAST CORRIDOR.

HOWEVER, THE SECRETARY OF TRANSPORTATION ELECTED TO DEFER THE PROTOTYPE TRAIN DEVELOPMENT AND REQUESTED THE INITIAL EQUIPMENT EVALUATION PHASE OF THE PROJECT BE EXPANDED TO INCLUDE MORE DIRECT SUPPORT TO THE NORTHEAST CORRIDOR IMPROVEMENT PROGRAM.

THE EFFORTS TO DEVELOP A NEW HIGH SPEED GROUND TRANSPORTATION SYSTEM AS AN ALTERNATIVE TO INCREASING THE SPEED OF EXISTING RAIL PASSENGER SERVICE WERE THUS HAMPERED BY A SERIES OF LEGISLATIVE DEVELOPMENTS COMBINED WITH THE RAPIDLY INCREASING CONGESTION OF THE HIGHWAYS AND AIRWAYS. THE DECISION BY THE FEDERAL GOVERNMENT TO MAINTAIN AND IMPROVE A NATIONAL NETWORK OF EXISTING RAIL PASSENGER

SERVICE, ALTHOUGH A NECESSITY TO AVOID THE TOTAL DEMISE OF SUPPORT FROM RAIL PASSENGERS, ADDED A TREMENDOUS DRAIN ON TRANSPORTATION FUNDS. CONSEQUENTLY, THE LAST FEDERAL FUNDING FOR DOT'S HIGH SPEED GROUND TRANSPORTATION RESEARCH AND DEVELOPMENT WAS IN 1975.

FURTHER LEGISLATION, BEGINNING WITH THE RAILROAD REVITALIZATION AND REGULATORY REFORM ACT OF 1976, WAS AIMED TOWARDS CONTINUED MAINTENANCE AND IMPROVEMENT OF CONVENTIONAL RAIL PASSENGER SERVICE.

IT IS A FACT THAT CONVENTIONAL RAIL PASSENGER SERVICE SYSTEMS AROUND THE WORLD CONTINUE TO LOSE MONEY AND REQUIRE HEAVY GOVERNMENT SUBSIDIES. IN DIRECT CONTRAST, THE JAPANESE SHINKANSEN TRAINS CONTINUE TO OPERATE AT A PROFIT.

MR. CHAIRMAN, I RESPECTFULLY SUBMIT THAT THE RAIL TRANSPORTATION LEGISLATIVE DECISIONS FROM 1970 ONWARD, ALTHOUGH NECESSARY, WERE ALSO VERY LIMITED IN SCOPE. RATHER THAN AGGRESSIVELY CONTINUING TO CONDUCT AND PURSUE RESEARCH AND DEVELOPMENT TO SEEK NEW TECHNOLOGY ENABLING UNITED STATES PASSENGER RAIL SERVICE TO COMPETE WITH OTHER MODES OF AVAILABLE TRANSPORTATION, THE FEDERAL GOVERNMENT DEVOTED ITSELF TO UPGRADING AND DEVELOPING THE AMTRAK FLEET AS WELL AS UNDERTAKING MASSIVE TRACK REHABILITATION PROGRAMS. EVEN A LARGE PORTION OF THE

RESEARCH CONDUCTED BY DOT AND FRA WAS AIMED AT BRINGING OTHER TECHNOLOGIES TO AN EXISTING SYSTEM UTILIZING TRACK OVER WHICH BOTH FREIGHT AND PASSENGER RAIL SERVICE MUST OPERATE. THE CONCEPT OF CONSTRUCTING A NEW SYSTEM, OR SPECIFIED ROUTES ALONG WHICH HIGH SPEED TRAINS WOULD OPERATE ON DEDICATED TRACK, WAS NEVER FULLY INVESTIGATED.

MR. CHAIRMAN, I HAVE APPEARED BEFORE YOUR COMMITTEE PREVIOUSLY TO STATE MY BELIEF THAT BULLET TRAINS CAN BE OPERATED PROFITABLY IN SELECTED HIGH-DENSITY, HIGHLY-TRAVELED TRANSPORTATION CORRIDORS IN THE UNITED STATES. FOUR CORRIDORS HAVE BEEN IDENTIFIED BY AMTRAK AS HAVING SIMILAR CHARACTERISTICS TO THE SUCCESSFUL JAPANESE SHINKANSEN LINE: LOS ANGELOS TO SAN DIEGO, DALLAS/FT. WORTH TO HOUSTON, MIAMI TO ORLANDO AND TAMPA, AND SEVERAL ROUTES EMERGING FROM CHICAGO.

A WELL KNOWN JAPANESE PHILANTHROPIST AND CHAIRMAN OF THE JAPAN SHIPBUILDING INDUSTRY FOUNDATION RECENTLY ANNOUNCED HIS INTENT TO PROVIDE AS MUCH AS $5 MILLION DOLLARS TO THE JAPAN RAILWAY TECHNICAL SERVICE AND THE JAPANESE NATIONAL RAILWAYS TO CONDUCT ENGINEERING FEASIBILITY STUDIES IN THE UNITED STATES. THE ENGINEERS ARE PART

OF A TEAM THAT DESIGNED AND BUILT THE SHINKANSEN BULLET TRAINS.

MR. CHAIRMAN, I BELIEVE A REVITALIZED RAIL PASSENGER SYSTEM WILL HAVE A DIRECT AND IMMEDIATE IMPACT ON THE NATION'S ECONOMY AND WILL ASSIST IN THE REINDUSTRIALIZATION OF AMERICA. IT WILL GIVE A WELL DESERVED AND MUCH NEEDED BOOST TO THE STEEL INDUSTRY OF THE MIDWEST AND NORTHEAST. IT WILL BREATHE NEW LIFE INTO THE RAILROAD EQUIPMENT MANUFACTURING INDUSTRY AND PROVIDE MANY JOBS. THE ECONOMICS OF THE UNITED STATES IS DEPENDENT ON ADEQUATE TRANSPORTATION OF GOODS AND PEOPLE AND WE HAVE NEGLECTED GROUND TRANSPORTATION BETWEEN OUR CITIES.

I CONCLUDE MY REMARKS WITH THESE FINAL RECOMMENDATIONS:

(1) THAT THE HOUSE FORM A RAIL CAUCUS WORKING INDEPENDENTLY AND IN COORDINATION WITH THE SENATE, OR A CONGRESSIONAL JOINT CAUCUS;

(2) THAT THE JOINT ECONOMIC COMMITTEE SHOULD EXAMINE AND SUPPORT THE COOPERATION BETWEEN THE UNITED STATES AND JAPAN AND ENCOURAGE THE JAPAN-UNITED STATES RAIL CONGRESS; AND

(3) TO FURTHER ENCOURAGE THIS DEVELOPMENT, AMTRAK AND FRA SHOULD WORK JOINTLY, WITH AMTRAK DEVELOPING THE SYSTEM AND FRA WORKING WITH JAPAN AND OTHER NATIONS ON THE TECHNOLOGY TO ACHIEVE THE BEST RAPID RAIL SYSTEM IN THE WORLD.

Representative REUSS. Our thanks to you, Representative Benjamin and Senator Durenberger. In my opening remarks I asked that we think big. That's precisely what both of you have done. We'd be most honored if you could join us here at the table, if your schedule permits, and thus welcome our friends from across the Pacific who will be with us in just a moment.

I would, however, like to particularly recognize Congressman Ed Madigan, who is the ranking member of the Transportation Subcommittee of the House Committee on Interstate and Foreign Commerce. He has played a real leadership role on all questions of transportation, along with his friend and colleague now-Governor Florio. The results aren't in yet, but he's always our friend. Congressman, I'd be honored to have you join in welcoming this group.

Representative MADIGAN. Mr. Chairman, thank you for the very kind words. Like you, I don't know if Jim Florio is a Governor or not. In any event he would still be a Congressman, and an excellent one, and certainly a leader in rail transportation matters. I know that like all the rest of us, he's very interested in what it is we are initiating here today.

To the two gentlemen who have already testified, let me express my gratitude for your interest in rail transportation. This is not just a nostalgia thing with me. It is clear to me that it is not with either of you. I think there is a very practical set of circumstances within the continental United States, not only in the four corridors that have been identified by Amtrak but certainly the cooperation of the Japanese and the gift which you have mentioned, Congressman Benjamin, to get that started will establish, I think, what you and I already believe to be the case, a reaffirmation of our belief that the work done by the Japanese will, I hope, call the attention of other Members of the Congress of both parties and the attention of the administration to the significant role that rail passenger service can play in the total transportation plan of the United States.

I am happy to have been invited by you gentlemen to join with you at our distinguished chairman's hearing. I know he will be a good leader and I promise to be a good follower. Thank you very much.

Representative REUSS. Thank you very much. Senator and Congressmen, if you'd join us up here, we'd be honored.

And now comes the historic moment. Commodore Perry, we are here, and we're going to ask our friends from Japan to come forward and honor us by sitting at the witness table. We'll ask Lawrence Gilson, who is vice president for development at Amtrak and who has been a tour guide for this outstanding group, to come forward and assist in the proper seating of this great delegation led by Japan's Representative Mutsuki Kato.

Mr. Gilson, would you be good enough to come forward and perhaps introduce your group to us? And while the scenes are being changed, I want to recognize one of our resident experts on Japan, Hon. Frederick Richmond of New York, a deep believer in passenger rail transport. Congressman Richmond.

Representative RICHMOND. Mr. Chairman, I think everything you're doing is wonderful. I'm 100 percent behind it.

Representative REUSS. Thank you, Congressman.

Mr. Gilson, I understand that our friends have an appointment with Vice President Bush later on this afternoon. I just wanted to

assure you and them that we will not intrude on that. I'm sure we'll be able to hear fully from them in a good time, so would you just proceed in your own way and end up, if you will, by introducing more officially Representative Kato so he may speak for the entire delegation.

TESTIMONY OF LAWRENCE GILSON, VICE PRESIDENT FOR CORPORATE DEVELOPMENT, AMTRAK

Mr. GILSON. Thank you, Mr. Chairman. It's my great pleasure to testify and to introduce to you the Honorable Mutsuki Kato, chairman of the delegation from the Diet. Mr. Kato is the second ranking member of the Liberal Democratic Policy Body, and the number one leader regarding transportation issues in the Diet. The meeting today flows out of discussions that have taken place throughout this year, involving Congressman Benjamin, Mr. Mitsuzuka, another member of this delegation, and others. In those earlier meetings, the value of the creation of a joint body such as the Japan-United States Rail Congress was clearly recognized. I'd like to introduce to you Mr. Kato, one of the most distinguished members of the Japanese Diet and the leadership of Japan as a whole.

Representative REUSS. Thank you very much, Mr. Gilson.

Mr. Kato, gentlemen of the Japanese Diet, you are most welcome. This is a great honor you do us and you will be assured we're going to listen very carefully, Mr. Kato, to your message.

STATEMENT OF HON. MUTSUKI KATO, JAPANESE HOUSE OF REPRESENTATIVES AND DELEGATION LEADER, JAPAN-UNITED STATES RAIL CONGRESS, ACCOMPANIED BY SHINJI AOKI, ATSUSHI EJIMA, DAIJI IOKA, YOSHITO FUKUOKA, HIROSHI MITSUZUKA, HIKOSABURO OKONOGI, KIYOSHI NISHINAKA, AKIRA KUROYANAGI, AND TEIKO OZAWA, DELEGATION MEMBERS

Mr. KATO. Mr. Chairman, I am Mutsuki Kato of the Japanese House of Representatives, and I'd like to introduce Shinji Aoki, Atsushi Ejima, Daiji Ioka, Yoshito Fukuoka, Hiroshi Mitsuzuka, Hikosaburo Okonogi, Kiyoshi Nishinaka, Akira Kuroyanagi, and Teiko Ozawa.

Mr. Chairman, honorable members of the committee, distinguished guests, ladies, and gentlemen, on behalf of the Japanese delegation to the Japan-United States Rail Congress I would like to express our gratitude for the friendship our countries enjoy. I am deeply honored by this opportunity to address you in these halls which house the weight and authority of the American political tradition.

I have been personally involved with railways in Japan for some 10 years. I have been dedicated to their improvement.

Larry Gilson of Amtrak will read a good deal of my prepared statement so that you might understand it more easily.

Mr. GILSON. With the chairman's permission, I will read a shortened version of Mr. Kato's prepared statement, and he understands that the full text will be included in the hearing record.

Representative REUSS. Without objection, so ordered. Would you then proceed, Mr. Gilson.

Mr. GILSON. In 1854, when Japan was still ruled by a military government headed by the Shogun, Commodore Matthew C. Perry of the U.S. Navy led his fleet into the Bay of Uraga in the shadow of Mount Fuji. One of the gifts Perry had brought to present to the Shogun was a working scale model of a steam train just large enough for people to ride on. This train, in fact no more than a toy, was the first train ever seen by the Japanese.

In 1869, just 1 year after the Meiji Restoration established a modern constitutional monarchy in Japan, the United States completed the transcontinental railroad. One of the first decisions of the new Japanese Government was to build its own railroad linking Tokyo and Yokohama, thus the planning of Japan's first rail line was just getting underway when the United States was completing its own momentous railroad construction project.

Not only in the beginnings that I have just related but throughout its entire development, the Japanese railway system has had a strong relationship with that in the United States, and we remain deeply grateful for the guidance that your country has provided. Indeed, it was your early help that saw our railway technology develop to the point where, 17 years ago, in 1964, the year of the Tokyo Olympiad, we were able to complete the Shinkansen, or bullet train as it is better known throughout the world.

In the past few years we in Japan have, in a very literal sense, kept our feet firmly on the ground while the United States has turned toward the stars, going beyond standard means of transportation to make rapid progress in the technology of space travel. Even the speed of our bullet train could not possibly match the pace of technological progress in the United States, and we pay deep homage to that progress.

Let us return from the stars and look at Japan for a moment. It was natural that Japan's first Shinkansen should link Tokyo and Osaka, the two cities at either end of this belt. This sector opened in 1964 and is known as the Tokaido Shinkansen. Later we extended the system 344 miles toward the south and called the new section the Sanyo Shinkansen. Today the system covers 664 miles between Tokyo and Hakata in the south, and next year we will finish two more segments extending 456 additional miles into Japan's north country.

Inasmuch as necessity is the mother of invention, the application of new technology begins with a problem that precipitates the new solution. As the technology advances, it is applied retroactively according to a priority basis of necessity. This is especially true in an industry with large amounts of fixed capital like railways. Therefore, when we build a bullet train system, we have to devise plans that anticipate needs far into the future. However, this ability to glimpse into the future does not come from inspiration. Rather, it comes from actual experience in operating such a system over a number of years.

We believe that the 17 years of experience has given us the knowledge and expertise to build a bullet train that will provide excellent service well into the 21st century. This confidence permeates the design of the new modern line.

Just a few weeks ago in response to an invitation by Amtrak President Alan Boyd, Japanese engineers began a study investi-

gating the feasibility of high-speed railways betweeen Los Angeles and San Diego, focusing on its profitability and its potential impact on regional development. A study team will look at other promising transportation corridors for high-speed service once the Los Angeles to San Diego is completed.

I've heard that Secretary Lewis of the Department of Transportation is intrigued by the study. If such a system proves feasible and is actually constructed, we are confident that our 17 years of actual experience in building and operating high-speed rails will enable us to help Amtrak realize a high-speed system which will provide excellent service into the next century.

Let us turn from these conjectures, however, for a moment and talk about the present.

For the past 2 years, the members of our delegation have given a great deal of thought to what the Japanese National Railways should be in the future. Late last year, we succeeded in formulating and passing legislation directing JNR toward a management policy that would effect higher profits by focusing on the bullet train and trunk line networks while condensing local lines. It took almost 100 hours of debate before the Diet before this bill was enacted. This legislation was prompted by the fact that except for the Shinkansen and a small number of urban commuting lines, the financial condition of the Japanese National Railways is not very good.

A look at the ledger for 1980 shows a U.S. deficit of $4.6 billion. Including the Shinkansen, there are seven lines covering some 960 route miles, which brought in a profit of $1.6 billion. The ledgers for these lines are written in heavy black ink—that is, for the Shinkansen lines—because their overall operating ratio is 63 percent. That is, for every $1 in revenue, only 63 cents goes out in expenses. The Shinkansen by itself brought in $1.3 billion in profit, 83 percent of the profit of the entire JNR national system.

We have been able to make three important observations based upon this analysis and this experience. The first is that conventional railroads are becoming increasingly as specialized as urban commuter transit operators.

The second observation is that passenger transportation in medium-length corridors between urban centers is the special preserve of high-speed lines like the Shinkansen. For this, I define "medium length" as 120 to 500 miles. During the 17 years of Shinkansen operation, the average traveling distance per passenger has hovered around 210 miles.

The third observation is that a serious problem exists, that the profits generated by the Shinkansen are not put directly to use only on the Shinkansen facilities, but are used to cover the losses of unprofitable lines throughout JNR. We believe this problem is peculiar to JNR and that if the Shinkansen were operated in the private sector in the United States, as is being considered in California and elsewhere, this problem would not arise.

Having given you an overview of the railroads, I would like to offer a few observations about the activities of the Shinkansen specifically.

The total number of passengers carried reached 1.6 billion on January 31 of this year and will hit 1.7 billion later this month.

JNR has and does take pride in the Shinkansen's unbroken safety record—17 years of service and almost 1.7 billion passenger miles carried without a single passenger injury.

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A special characteristic of the Shinkansen's operating budget is that the personnel costs are extremely low, constituting only 18 percent of the total. The interest and depreciation costs consume 34 percent, also lower than conventional lines which call for 53 percent for personnel and 14 percent for capital. These figures reflect the fact that the Shinkansen is a totally systemized, integrated approach, and the profit flows from lower construction costs and operating efficiencies.

I would like to discuss briefly, because of the jurisdiction of this committee, the impact that the Shinkansen has had no overall development in Japan.

In 1969, we estimated that over one-quarter of the 278 million people who rode the Shinkansen in the previous 5 years were newly generated riders, by which we mean passengers who transferred to the Shinkansen from other modes or who began traveling as a result of the existence of the new Shinkansen line. This phenomenon clearly demonstrates the attraction of the Shinkansen's speed and its ability to contribute to people's mobility.

In addition, the industrial organizations along the Tokyo-Osaka Shinkansen route have risen 30 percent in the 9 years between 1963 and 1972, compared to 19 percent along other routes and 25 percent for the country as a whole.

The working population in the same period has increased 33 percent along this route. Given the 10-percent growth in these areas overall, the Shinkansen has clearly had an attractive effect on both employment and on industrial organizations. While increasing employment opportunities as a whole, the Shinkansen has enabled the factories on this belt—that is, between Tokyo and Osaka—to rationalize their management level by reducing the travel time between the head offices and the factories or branches.

JNR is also engaged in an active program of research in railway technology. Currently the most spectacular product of this research is the so-called magnetically levitated train or MagLev which literally flies down its 4.4 mile test track daily. In December 1979, it set a new world land speed record of 323 miles an hour. Preparations for test runs with passengers are underway.

If this type of train proves economically and technically feasible, someday the trip between New York and Washington could be taken in less than an hour.

With these projects, we test our knowledge and bravely try new plans to strengthen the bonds consolidating the vitality of our people, the natural resources with which we have been blessed, and the scattered geographical entities of our country in the hope of developing new strength as a country.

We are confident that this new strength will in turn develop into a force that protects not only the peace within our country but throughout the world.

Mr. Kato will conclude the statement.

Mr. KATO. I would like to express my deep gratitude for the support and the guidance the U.S. Congress has given us. I'd also like to share my hope with you that in the future we will all be blessed with a deeper understanding as neighbors on an ever-shrinking planet. We will do our best to contribute to the development of passenger railways in both the United States and Japan.

Thank you very much.

[The prepared statement of Mr. Kato follows:]

PREPARED STATEMENT OF HON. MUTSUKI KATO

MR. CHAIRMAN, HONORABLE MEMBERS OF THE COMMITTEE, DISTINGUISHED GUESTS, LADIES AND GENTLEMEN:

I GREET YOU ON BEHALF OF THE JAPANESE DELEGATION TO TOMORROW'S INAUGURAL MEETING OF THE JAPAN-UNITED STATES RAIL CONGRESS. I WOULD ALSO LIKE TO EXPRESS THE GRATITUDE EACH AND EVERY MEMBER OF THIS DELEGATION FEELS FOR THE FRIENDSHIP OUR COUNTRIES ENJOY.

LET ME FINISH MY SELF-INTRODUCTION BY SAYING THAT I, PERSONALLY, AM DEEPLY HONORED BY THIS OPPORTUNITY TO ADDRESS YOU IN THESE HALLS WHICH HOUSE THE WEIGHT AND AUTHORITY OF THE AMERICAN POLITICAL TRADITION.

IN 1854 WHEN JAPAN WAS STILL RULED BY A MILITARY GOVERNMENT HEADED BY THE SHOGUN, COMMODORE MATTHEW C. PERRY OF THE UNITED STATES NAVY LED HIS FLEET INTO THE BAY OF URAGA, IN THE SHADOW OF MOUNT FUJI. ONE OF THE GIFTS PERRY HAD BROUGHT TO PRESENT TO THE SHOGUN WAS A WORKING SCALE MODEL OF A STEAM TRAIN, JUST LARGE ENOUGH FOR PEOPLE TO RIDE ON. THIS TRAIN, IN FACT NO MORE THAN A TOY, WAS THE FIRST TRAIN EVER SEEN BY THE JAPANESE. IN 1869, JUST ONE YEAR AFTER THE MEIJI RESTORATION ESTABLISHED A MODERN CONSTITUTIONAL MONARCHY IN JAPAN, THE UNITED STATES COMPLETED THE TRANSCONTINENTAL RAILWAY. ONE OF THE FIRST DECISIONS OF THE NEW JAPANESE GOVERNMENT WAS TO BUILD A RAILROAD LINKING TOKYO AND YOKOHAMA. THUS, THE PLANNING OF JAPAN'S FIRST RAIL LINE WAS JUST GETTING UNDERWAY WHEN THE UNITED STATES WAS COMPLETING A MOMENTOUS RAILWAY CONSTRUCTION PROJECT.

NOT ONLY IN THE BEGINNINGS THAT I HAVE JUST RELATED, BUT THROUGHOUT ITS ENTIRE DEVELOPMENT, THE JAPANESE RAILWAY SYSTEM HAS HAD A STRONG RELATIONSHIP WITH THAT IN THE UNITED STATES AND WE REMAIN DEEPLY GRATEFUL FOR THE GUIDANCE YOUR COUNTRY HAS PROVIDED. INDEED, IT WAS YOUR EARLY HELP THAT SAW OUR RAILWAY TECHNOLOGY DEVELOP TO THE POINT WHERE 17 YEARS AGO IN 1964, THE YEAR OF THE TOKYO OLYMPIAD, WE WERE ABLE TO COMPLETE THE SHINKANSEN OR THE "BULLET TRAIN" AS IT IS BETTER KNOWN THROUGHOUT THE WORLD. IN THE PAST FEW YEARS, WE IN JAPAN HAVE, IN A VERY LITERAL SENSE, KEPT OUR FEET FIRMLY ON THE GROUND WHILE THE UNITED STATES HAS TURNED TOWARD THE STARS, GOING BEYOND STANDARD MEANS OF TRANSPORTATION TO MAKE RAPID PROGRESS IN THE TECHNOLOGY OF SPACE TRAVEL. EVEN THE SPEED OF OUR BULLET TRAIN CAN NOT MATCH THE PACE OF TECHNOLOGICAL PROGRESS IN THE UNITED STATES. WE PAY DEEP HOMAGE TO THIS PROGRESS.

LET US RETURN FROM THE STARS AND LOOK AT JAPAN FOR A MOMENT. OVER HALF OF JAPAN'S TOTAL POPULATION OF 110 MILLION PEOPLE ARE GATHERED INTO THE 320 MILE BELT BETWEEN TOKYO AND OSAKA KNOWN AS THE TOKAIDO MEGALOPOLIS. THIS AREA ACCOUNTS FOR ONLY 20% OF THE JAPANESE LAND MASS YET IT CONTAINS BETWEEN 70 AND 80% OF JAPAN'S CRUCIAL INDUSTRIES. IT WAS NATURAL THAT JAPAN'S FIRST SHINKANSEN SHOULD LINK TOKYO AND OSAKA,

THE HUGE CITIES AT EITHER END OF THIS BELT. THIS SECTION, OPENED IN 1964, IS KNOWN AS THE TOKAIDO SHINKANSEN. LATER WE EXTENDED THIS SYSTEM 344 MILES TOWARD THE SOUTH AND CALLED THE NEW SECTION THE SANYO SHINKANSEN. TODAY THE SYSTEM COVERS 664 MILES BETWEEN TOKYO AND HAKATA IN THE SOUTH AND NEXT YEAR WE WILL FINISH TWO MORE SEGMENTS EXTENDING 456 MILES INTO JAPAN'S NORTH COUNTRY. THIS WILL BRING THE SHINKANSEN SYSTEM TO A TOTAL OF 1120 ROUTE MILES. THE PATIENCE OF THE NORTH COUNTRY PEOPLE IN WAITING FOR THIS SERVICE WILL BE REWARDED WITH MORE CONVENIENT AND MORE COMFORTABLE SERVICE THAN ON THE OLDER LINE DUE TO THE INCORPORATION OF NEW TECHNOLOGY. ALTHOUGH THE NEW LINES' HIGHEST CRUISING SPEED HAS BEEN SET AT 130 MILES PER HOUR, THE NEW ROLLING STOCK AND TRACKS ARE CAPABLE OF SUPPORTING SPEEDS OF OVER 160 MILES PER HOUR. THE ACCOMMODATIONS OF THE NEW SHINKANSEN CARS HAVE BEEN IMPROVED NOT ONLY IN APPEARANCE, BUT IN TERMS OF RIDE-COMFORT AND SAFETY. SINCE THE NORTH COUNTRY IS A REGION OF HEAVY SNOWS, WE HAVE DEVELOPED A SERIES OF OVERLAPPING SNOW COUNTERMEASURES TO GUARANTEE SAFETY. FOR EXAMPLE, WE HAVE INSTALLED SNOW MELTING EQUIPMENT ON THE TRACKS AND HAVE DESIGNED A SPECIAL BODY MOUNTING SYSTEM THAT ENCLOSES THE UNDERFLOOR EQUIPMENT.

IN AS MUCH AS NECESSITY IS THE MOTHER OF INVENTION, THE APPLICATION OF NEW TECHNOLOGY BEGINS WITH THE PROBLEM THAT NECESSITATED THE NEW SOLUTION. AS THE TECHNOLOGY ADVANCES, IT IS APPLIED RETROACTIVELY ACCORDING TO A PRIORITY BASED ON NECESSITY. THIS IS ESPECIALLY TRUE IN AN INDUSTRY WITH LARGE AMOUNTS OF FIXED CAPITAL LIKE A RAILWAY. THEREFORE, WHEN WE BUILD A BULLET TRAIN SYSTEM, WE MUST DEVISE PLANS THAT ANTICIPATE NEEDS QUITE FAR INTO THE FUTURE. HOWEVER, THIS ABILITY TO GLIMPSE INTO THE FUTURE DOES NOT COME FROM INSPIRATION, RATHER IT COMES FROM ACTUAL EXPERIENCE OPERATING SUCH A SYSTEM OVER A NUMBER OF YEARS. WE BELIEVE THAT 17 YEARS OF EXPERIENCE HAS GIVEN US THE

KNOWLEDGE AND EXPERTISE TO BUILD A BULLET TRAIN THAT WILL PROVIDE EXCELLENT SERVICE WELL INTO THE 21ST CENTURY. THIS CONFIDENCE PERMEATES THE DESIGN OF THE BULLET TRAIN FOR THE NORTH COUNTRY.

JUST A FEW WEEKS AGO, IN RESPONSE TO AN INVITATION BY AMTRAK PRESIDENT ALAN BOYD, ENGINEERS FROM JAPAN BEGAN A STUDY INVESTIGATING THE FEASIBILITY OF A HIGH SPEED RAILWAY BETWEEN LOS ANGELES AND SAN DIEGO, ITS PROFITABILITY, AND ITS POTENTIAL EFFECT ON REGIONAL DEVELOPMENT. THE STUDY TEAM WILL LOOK AT OTHER PROMISING TRANSPORTATION CORRIDORS FOR HIGH SPEED TRAINS ONCE THE LOS ANGELES TO SAN DIEGO STUDY IS COMPLETE. I HAVE HEARD THAT SECRETARY LEWIS OF THE UNITED STATES DEPARTMENT OF TRANSPORTATION IS INTRIGUED BY AND APPROVES OF THIS STUDY. IF SUCH A SYSTEM PROVES FEASIBLE AND IS ACTUALLY CONSTRUCTED, WE ARE CONFIDENT THAT OUR 17 YEARS OF ACTUAL EXPERIENCE IN BUILDING AND OPERATING HIGH SPEED RAILWAYS WILL ENABLE US TO HELP AMTRAK REALIZE A HIGH SPEED RAIL SYSTEM THAT WILL PROVIDE EXCELLENT SERVICE WELL INTO THE 21ST CENTURY.

LET US END THESE CONJECTURES FOR A MOMENT AND RETURN TO WHAT HAS BEEN HAPPENING IN THE RAILROAD INDUSTRY IN JAPAN. FOR THE PAST TWO YEARS, THE MEMBERS OF OUR DELEGATION HAVE GIVEN A GREAT DEAL OF THOUGHT TO WHAT JAPANESE NATIONAL RAILWAYS SHOULD BE IN THE FUTURE. LATE LAST YEAR WE SUCCEEDED IN FORMULATING AND PASSING LEGISLATION DIRECTING JNR TOWARD A MANAGEMENT POLICY THAT WOULD EFFECT HIGHER PROFITS BY FOCUSING ON THE BULLET TRAIN AND TRUNK LINE NETWORKS WHILE CONDENSING LOCAL LINES. IT TOOK ALMOST 100 HOURS OF DEBATE BEFORE THE DIET ENACTED THIS BILL. THIS LEGISLATION WAS PROMPTED BY THE FACT THAT, EXCEPT FOR THE SHINKANSEN AND A TINY NUMBER OF URBAN COMMUTING LINES, THE FINANCIAL CONDITION OF JAPANESE NATIONAL RAILWAYS IS NOT VERY GOOD. A LOOK AT THE LEDGER FOR 1980 SHOWS A DEFICIT FOR $4.6 BILLION DOLLARS. INCLUDING THE SHINKANSEN, THERE ARE 7 LINES, COVERING SOME 960 ROUTE-

MILES, WHICH BROUGHT IN A TOTAL PROFIT OF $1.6 BILLION DOLLARS. JNR'S TOTAL OPERATIONS COVER 14,075 ROUTE-MILES, SO THE PROFIT-MAKING LINES ACCOUNT FOR A MERE 7% OF THE TOTAL. THE LEDGERS FOR THESE LINES ARE WRITTEN IN HEAVY BLACK INK BECAUSE THEY HAVE AN OVERALL OPERATING RATIO OF 63%, THAT IS, FOR EACH $1 DOLLAR IN REVENUE, ONLY 63 CENTS GOES OUT FOR EXPENSES. THE SHINKANSEN, BY ITSELF, BROUGHT IN $1.35 BILLION IN PROFIT, 83% OF THE PROFIT FOR THE ENTIRE NATIONAL SYSTEM. SOME PEOPLE MAY QUESTION THESE FIGURES AND MAY EVEN SUGGEST THAT JNR MANIPULATES THEM BY HIDING SHINKANSEN EXPENSES IN THE EXPENSES OF OTHER LINES, BUT I CAN ASSURE YOU THAT THIS IS ABSOLUTELY NOT THE CASE. JNR CALCULATES ITS BALANCE SHEET ACCORDING TO STANDARD INDUSTRIAL ACCOUNTING PRINCIPLES, AND IN ADDITION, WE IN THE DIET SCRUTINIZE ITS FINANCIAL REPORT EACH AND EVERY YEAR. THE SIX OTHER PROFIT-MAKING LINES ARE THE TOKYO LOOP LINE AND THE 4 LINES THAT LINK IT WITH THE SUBURBS AND THE SINGLE 20-MILE LOOP LINE THAT ENCIRCLES DOWNTOWN OSAKA.

WE HAVE BEEN ABLE TO MAKE 3 IMPORTANT OBSERVATIONS FROM THESE FACTS. THE FIRST IS THAT CONVENTIONAL RAILROADS ARE BECOMING INCREASINGLY SPECIALIZED AS URBAN, COMMUTER TRANSIT SYSTEMS. JAPAN'S MAJOR PRIVATE RAILROADS ARE SO SPECIALIZED THAT ONE COULD ACCURATELY SAY THAT THEY ARE PURELY PASSENGER RAILWAYS. WITH ONLY 1 EXCEPTION, THE 14 MAJOR PRIVATE RAILROADS IN URBAN AREAS ARE IN EXCELLENT FINANCIAL HEALTH, CONSISTENTLY PAYING ANNUAL DIVIDENDS OF 7 TO 10% TO THEIR STOCKHOLDERS. THE PRIVATE SECTOR IN JAPAN HAS DEMONSTRATED THAT URBAN TRANSIT IS A PROFITABLE ENTERPRISE. THE SECOND OBSERVATION IS THAT PASSENGER TRANSPORTATION IN MEDIUM LENGTH CORRIDORS BETWEEN URBAN CENTERS IS THE SPECIAL PRESERVE OF HIGH SPEED LINES LIKE THE SHINKANSEN. I DEFINE MEDIUM LENGTH AS DISTANCES OF 120 TO 500 MILES. DURING THE 17 YEARS OF SHINKANSEN OPERATION, THE AVERAGE TRAVELLING DISTANCE PER PASSENGER

HAS HOVERED AT THE 210 MILE MARK. THE THIRD OBSERVATION IS THAT A SERIOUS PROBLEM EXISTS--THAT THE PROFITS GENERATED BY THE SHINKANSEN ARE NOT PUT DIRECTLY TO USE IMPROVING THE SHINKANSEN FACILITIES OR FINANCING ADDITIONAL SHINKANSEN ROUTES, BUT ARE BEING USED TO COVER THE LOSSES OF UNPROFITABLE LINES. THIS PROBLEM MAY BE PECULIAR TO JNR, FOR IT NEEDS TO DIVERT THE STRONG POINT OF THE SHINKANSEN, ITS PROFIT, TO OTHER CONSTRUCTION AND MAINTENANCE COSTS, CAUSING THE PROFIT TO DISAPPEAR IN THE OVERALL BUDGET. IF THE SHINKANSEN WERE OPERATED IN THE PRIVATE SECTOR, AS IS BEING CONSIDERED FOR CALIFORNIA AND OTHER U.S. SITES, THIS PROBLEM WOULD NOT ARISE. TO CORRECT THIS PROBLEM SO THAT IT NO LONGER DETRACTS FROM THE SHINKANSEN, WE ARE TRYING TO PUT THE CONVENTIONAL LINES ONTO A SOUND FINANCIAL BASE BY A THOROUGH-GOING RATIONALIZATION OF THE ENTIRE SYSTEM AND BY DISCONTINUING LOCAL LINES WHOSE UTILTY IS MARKEDLY REDUCED. AS A RESULT OF THE 100 HOURS OF DEBATE IN THE DIET THAT I MENTIONED BEFORE, WE CREATED A RATIONALIZATION POLICY WHICH WILL REDUCE JNR'S PERSONNEL TO 350,000 BY 1985 FROM ITS CURRENT LEVEL OF 420,000 AND WILL, IN THE SAME PERIOD, TRANSFER SOME 1,200 MILES OF LOCAL TRACK TO BUS SERVICE OR TO THE HANDS OF PRIVATE RAILWAYS.

HAVING GIVEN YOU AN OVERVIEW OF THE RAILWAYS, I WOULD LIKE TO TALK ABOUT THE SHINKANSEN IN GREATER DETAIL. THE 320 MILE ORIGINAL SEGMENT BETWEEN TOKYO AND OSAKA WAS OPENED ON OCTOBER 1, 1964, JUST 10 DAYS BEFORE THE OPENING OF THE TOKYO OLYMPIAD. ON MARCH 10, 1975, THE FINAL SOUTHWARD EXTENSION TO HAKATA ON THE ISLAND OF KYUSHU WAS OPENED, BRINGING THE ROUTE TO 664 MILES. ITS REVENUE IN 1980 WAS $3.3 BILLION DOLLARS AND THE EXPENDITURES $1.95 BILLION, YIELDING A PROFIT OF $1.35 BILLION. EVEN THOUGH THE CONVENTIONAL LINES PARALLELING THE SHINKANSEN HAVE A DEFICIT OF $1.26 BILLION DOLLARS FOR COMBINED PASSENGER AND FREIGHT SERVICE, THERE WOULD STILL BE A PROFIT OF 900 MILLION DOLLARS. IF WE WERE

TO LOOK AT JUST THE TOKYO-HAKATA ROUTES. THE SHINKANSEN'S DAILY AVERAGE RIDERSHIP IS 340,000 PEOPLE AND IT CARRIES ABOUT 800,000 PEOPLE ON PEAK DAYS. ON WEEKDAYS 62.5% OF THE PASSENGERS ARE TRAVELLING ON BUSINESS WHILE THE PERCENTAGES REVERSE THEMSELVES ON WEEKENDS WITH 69.4% TRAVELLING AS TOURISTS OR ON PERSONAL BUSINESS. THE ANNUAL RIDERSHIP IS 130 MILLION PEOPLE. THE PERIOD REQUIRED TO CARRY 100 MILLION PASSENGERS IS NOW ABOUT 300 DAYS. THE TOTAL NUMBER OF PASSENGERS CARRIED REACHED 1.6 BILLION ON JANUARY 31 OF THIS YEAR AND WILL HIT THE 1.7 BILLION MARK LATE THIS MONTH. JNR CAN AND DOES TAKE PRIDE IN THE SHINKANSEN'S UNBROKEN SAFETY RECORD--17 YEARS OF SERVICE AND ALMOST 1.7 BILLION PASSENGERS CARRIED WITHOUT A SINGLE PASSENGER INJURY.

THE EFFECT OF INFLATION MAKES AN ACCURATE DISCUSSION OF THE CONSTRUCTION COSTS QUITE DIFFICULT, BUT THE NOMINAL COSTS AT THE TIME OF CONSTRUCTION WERE $5.9 BILLION DOLLARS FOR THE 664 MILE ROUTE. I DOUBT IF THIS COULD BE DONE TODAY FOR TWICE THAT AMOUNT.

A SPECIAL CHARACTERISTIC OF THE SHINKANSEN'S OPERATING BUDGET IS THAT THE PERSONNEL COSTS ARE EXTREMELY LOW, ONLY 18%. THE INTEREST AND DEPRECIATION COSTS CONSUME 34% IN CONTRAST TO THE CONVENTIONAL LINES WHICH REQUIRE 53% FOR PERSONNEL AND 14% FOR CAPITAL COSTS. THESE FIGURES COULD LEAD ONE TO CONSIDER THE SHINKANSEN TO BE A FULLY-SYSTEMIZED, AUTOMATED MACHINE, THE PROFIT FROM WHICH COULD BE INCREASED BY LOWERING CONSTRUCTION COSTS AND OPERATING IT AS EFFICIENTLY AS POSSIBLE.

I WOULD NOW LIKE TO DISCUSS THE IMPACT THAT THE SHINKANSEN HAS HAD ON OVERALL DEVELOPMENT IN JAPAN. IN 1969 WE ESTIMATED THAT OVER ONE-QUARTER, OR SOME 75.6 MILLION OF THE 278.5 MILLION PEOPLE WHO RODE THE SHINKANSEN BETWEEN 1964 AND 1969, WERE NEWLY GENERATED RIDERS. BY THE EXPRESSION "NEWLY GENERATED RIDERS" WE MEAN THOSE PASSENGERS WHO

TRANSFERRED TO THE SHINKANSEN FROM OTHER MODES OF TRANSPORTATION OR WHO BEGAN TRAVELLING BECAUSE OF THE SPEED AND CONVENIENCE OF THE SHINKANSEN, NOT THOSE WHO TRANSFERRED TO IT FROM CONVENTIONAL LINES. THIS PHENOMENUM CLEARLY DEMONSTRATES THE ATTRACTION OF THE SHINKANSEN'S SPEED AND ITS ABILITY TO CONTRIBUTE TO THE PEOPLE'S MOBILITY. THE NUMBER OF INDUSTRIAL ORGANIZATIONS ALONG THE TOKYO-OSAKA SHINKANSEN ROUTE HAS RISEN 30% BETWEEN 1963 AND 1972 AS COMPARED TO 19% ALONG OTHER ROUTES AND 25% FOR THE COUNTRY AS A WHOLE. IN ADDITION, THE WORKING POPULATION IN THE SAME PERIOD INCREASED 33% ALONG THE SHINKANSEN ROUTE. GIVEN THE 10% INCREASE IN ALL OTHER AREAS, WE CAN ASSUME THAT THE SHINKANSEN HAS ALSO HAD A GREAT EFFECT ON EMPLOYMENT OPPORTUNITIES. WHILE INCREASING EMPLOYMENT OPPORTUNITIES AS A WHOLE, THE SHINKANSEN HAS ENABLED THE FACTORIES ON THIS BELT TO RATIONALIZE ON THE MANAGEMENT LEVEL BY REDUCING THE TRAVEL TIME BETWEEN THE HEAD OFFICE AND THE FACTORIES OR BRANCH OFFICES, MAKING A ONE DAY ROUND TRIP NOT ONLY POSSIBLE, BUT COMFORTABLE. RATIONALIZATION IN OTHER AREAS HAS LED TO A 10% REDUCTION IN THE MANAGEMENT FORCE, BUT ALONG THE SHINKANSEN ROUTE, THE FIGURE IS DOWN 53%.

IF ONE WERE TO PICK THE MOST SPECTACULAR CHARACTERISTIC OF THE SHINKANSEN, IT WOULD BE ITS SPEED. AND IF WE ARE TO SPEAK OF HIGH SPEED, WE MUST CONSIDER HOW THE SHINKANSEN DOES IN COMPETITION WITH THE AIRLINES. CURRENTLY, IN THE CORRIDORS BETWEEN MAJOR CITIES WHERE THE SHINKANSEN RUNS, IT HAS CAPTURED AT LEAST AN 80% SHARE OF THE PASSENGER MARKET IN THE 213 MILES BETWEEN TOKYO AND NAGOYA, THE 320 MILES BETWEEN TOKYO AND OSAKA, AND THE 510 MILES BETWEEN TOKYO AND HIROSHIMA. GIVEN THIS EXPERIENCE, WE CAN SAY THAT THE SHINKANSEN DEMONSTRATES ITS MAXIMUM EFFECTIVENESS IN CORRIDORS ON THE 120 TO 500 MILE RANGE. OF THE THREE SEGMENTS I JUST MENTIONED, THE 320 MILES BETWEEN TOKYO AND OSAKA,

WHICH THE HIKARI SUPER EXPRESS COVERS IN 3 HOURS AND 10 MINUTES, IS THE MOST HEAVILY TRAVELLED. THE SLOWER KODAMA SUPER EXPRESS ALSO SERVES THIS ROUTE WHICH HAS A DAILY TOTAL OF ALMOST 130 TRIPS EACH WAY. ON THE OTHER HAND, THE AIRLINES OFFER ONLY 13 FLIGHTS EACH WAY, AND THE TRIP TAKES ABOUT 3 HOURS WHEN YOU INCLUDE THE COMMUTE TO THE AIRPORT. LET'S ALSO LOOK AT THE ENERGY CONSUMPTION FOR BOTH MODES IN THIS SEGMENT. OVER SEVERAL YEARS, THE HIKARI SUPER EXPRESS CONSUMED AN AVERAGE OF 1.5 GALLONS OF FUEL PER PASSENGER VERSUS 9.5 GALLONS PER PASSENGER FOR THE AIRLINES. THE SHINKANSEN ACTUALLY CONSUMED ONE-SIXTH THE FUEL, OFFERING A SAVINGS OF 8.0 GALLONS PER PASSENGER. IF THE 3.64 MILLION PEOPLE WHO FLEW THE TOKYO-OSAKA ROUTE IN 1979 HAD USED THE SHINKANSEN, JAPAN WOULD HAVE SAVED 29.3 MILLION GALLONS OF FUEL. THESE FIGURES MAKE THE SHINKANSEN'S FUEL-EFFICIENCY ABUNDANTLY CLEAR AND FUEL-EFFICIENCY IS TREMENDOUSLY IMPORTANT TO A COUNTRY LIKE JAPAN WHICH HAS TO IMPORT VIRTUALLY EVERY DROP OF OIL IT USES.

EVEN THOUGH THE SHINKANSEN DOES, IN FACT, HAVE MANY EXCELLENT CHARACTERISTICS, WE DO NOT EXPECT SUCH HIGH REVENUES FROM THE NEW ROUTES WE ARE NOW PLANNING DUE TO SUCH DIFFERENCES AS POPULATION AND MOVEMENT BETWEEN CITIES AND ALSO DUE TO THE HUGE INVESTMENT REQUIRED. HOWEVER, WHEN WE CONSIDER THE 5 PLANNED ROUTES FROM THE BROAD VIEWPOINT OF PREPARING OUR COUNTRY FOR THE 21ST CENTURY, THIS PROJECT NO LONGER REPRESENTS THE CONSTRUCTION OF AN ADDITIONAL FACILITY FOR THE SINGLE ENTERPRISE KNOWN AS JAPANESE NATIONAL RAILWAYS, RATHER IT BECOMES THE CREATION OF A NATIONAL RESOURCE. THE MEMBERS OF THIS DELEGATION SPENT THE LAST HALF OF 1980 IN A CLOSE STUDY OF THE 5 PROPOSED ROUTES TO GIVE GREATER SUBSTANCE TO THE PLAN. THE PRIME MINISTER AND HIS CABINET PROPOSE ALMOST ALL THE LEGISLATION IN JAPAN, YET IN 1970 A GROUP OF LEGISLATORS PROPOSED THE "LAW FOR CONSTRUCTION OF NATIONWIDE

HIGH SPEED RAILWAYS" AND SHEPHERDED IT THROUGH THE DIET. LAST YEAR WE INCREASED THE ANNUAL RESEARCH BUDGET FOR THIS PROJECT TO SUPPORT AN IN-DEPTH STUDY OF ALTERNATE FINANCING METHODS FOR THE HUGE BURDEN TO BE IMPOSED BY THE CONSTRUCTION COSTS. BASED ON 1980 PRICES, THE TOTAL COST OF THESE 5 LINES WOULD BE $23.8 BILLION DOLLARS--AN AMOUNT THAT JNR COULD NOT POSSIBLY MANAGE BY ITSELF. WE HAVE BEEN EXPLORING THE POSSIBILITY OF NATIONAL AND REGIONAL GOVERNMENTS' SHARING THE COSTS. THERE ARE TWO MAJOR ALTERNATIVES FOR FINANCING THE PROJECT--ONE WOULD BE A SUBSIDY OF ACTUAL CONSTRUCTION COSTS AND THE OTHER WOULD BE A FULL SUBSIDY FOR THE INTEREST ON LOANS COVERING THE CONSTRUCTION COSTS. IF CONSTRUCTION COSTS ARE SUBSIDIZED, THE LINES WOULD BE RUNNING IN THE BLACK BY THE END OF THEIR FIRST YEAR OF OPERATIONS, WHEREAS IT WOULD TAKE 5 YEARS TO MOVE INTO THE BLACK IF THE SUBSIDY WERE TO TAKE THE FORM OF A TWENTY YEAR LOAN.

HOWEVER, WE ARE STILL FACED BY ONE MAJOR OBSTACLE. THIS INVESTMENT IS SO GREAT THAT THE LOCAL GOVERNMENTS MAY ENDANGER THEIR FINANCIAL STABILITY DESPITE THEIR GOALS OF IMPROVING THE LIVES OF THEIR CITIZENS AND AIDING REGIONAL DEVELOPMENT. FOR JUST THIS REASON, THERE IS A GENERAL LAW THAT PROHIBITS LOCAL GOVERNMENTS FROM INVESTING IN JNR PROJECTS. IT WAS NECESSARY TO REVISE THIS LAW FOR THIS PARTICULAR EXCEPTION. THIS REVISION PASSED THE DIET IN THE FORM OF A BILL ORIGINATING FROM THE DIET FLOOR. WE HAVE ALREADY STARTED TO DRAW SYSTEMATIC PLANS FOR CONSTRUCTING THE 5 NEW SHINKANSEN ROUTES, BUT THIS AUTUMN WE ARE FACED WITH A MAJOR DEBATE ON RAISING THE FUNDS AND ASSIGNING A PRIORITY TO THE ROUTES. DESPITE THE CHILL IN THE AIR, THE JAPANESE DELEGATION EXPECTS A VERY "HOT" AUTUMN.

I HAVE SPENT A GREAT DEAL OF TIME DISCUSSING THE SHINKANSEN, BUT NOW I WOULD LIKE TO RETURN TO A MORE GENERAL TOPIC FOR A MOMENT. JAPAN IS NOT

AS WEALTHY AS THE UNITED STATES EITHER IN AREA OR IN NATURAL RESOURCES. IN ORDER TO MAKE THE LIVES OF OUR PEOPLE AS COMFORTABLE AS THOSE OF YOUR CITIZENS, WE MUST PLAN AND ORGANIZE. OUR COUNTRY IS COMPOSED OF FOUR ISLANDS WITH HONSHU, THE LARGEST, AT THE CENTER, HOKKAIDO IN THE NORTH, AND SHIKOKU AND KYUSHU IN THE SOUTH. THE JOINING OF THESE FOUR ISLANDS INTO ONE CONTINUOUS WHOLE IS CRUCIAL TO OUR NATIONAL STRUCTURE. TO THIS END, KYUSHU AND HONSHU HAVE BEEN JOINED BY BOTH AN UNDERSEA AUTOMOBILE TUNNEL AND AN UNDERSEA RAILWAY TUNNEL WE ARE NOW ENGAGED IN TWO MAJOR CONSTRUCTION PROJECTS: THE SEIKAN TUNNEL, A 34 MILE UNDERSEA TUNNEL LINKING HONSHU AND HOKKAIDO; AND THE SHIKOKU-HONSHU BRIDGE PROJECT WHICH WILL LINK THOSE TWO ISLANDS ALONG 3 ROUTES VIA SUSPENSION BRIDGES. THE COST OF THE SEIKAN TUNNEL WILL COME TO ABOUT 2.1 BILLION DOLLARS WHEN IT IS COMPLETED IN 1984. IT IS BEING PLANNED FOR BOTH CONVENTIONAL AND SHINKANSEN TRAINS. THE SUSPENSION BRIDGES HAVE BEEN DESIGNED FOR JOINT USE BY BOTH AUTOMOBILES AND THE SHINKANSEN. WORK IS ALREADY PROGRESSING ON THE BRIDGE ROUTE FROM OKAYAMA TO SHIKOKU AND IT SHOULD BE COMPLETED BY 1987.

JNR IS ALSO ENGAGED IN AN ACTIVE PROGRAM OF RESEARCH IN RAILWAY TECHNOLOGY. CURRENTLY, THE MOST SPECTACULAR PRODUCT OF THIS RESEARCH IS THE MAGNETICALLY LEVITATED TRAIN, OR MAGLEV, WHICH LITERALLY FLIES DOWN ITS 4.4 MILE TEST TRACK DAILY. IN DECEMBER 1979 IT SET A NEW WORLD SPEED RECORD OF 323 MILES PER HOUR. PREPARATIONS FOR TEST RUNS WITH PASSENGERS ARE UNDERWAY. IF THIS TYPE OF TRAIN PROVES ECONOMICALLY AND TECHNICALLY FEASIBLE, SOMEDAY THE TRIP BETWEEN NEW YORK AND WASHINGTON COULD TAKE LESS THAN ONE HOUR.

WITH THESE PROJECTS, WE TEST OUR KNOWLEDGE AND BRAVELY TRY NEW PLANS TO STRENGTHEN THE BONDS CONSOLIDATING THE VITALITY OF OUR PEOPLE,

THE NATURAL RESOURCES WE HAVE BEEN BLESSED WITH, AND THE SCATTERED GEOGRAPHICAL ENTITIES OF OUR COUNTRY IN THE HOPE OF DEVELOPING NEW STRENGTH AS A COUNTRY. WE ARE CONFIDENT THAT THIS NEW STRENGTH WILL, IN TURN, DEVELOP INTO A FORCE THAT PROTECTS NOT ONLY THE PEACE WITHIN OUR COUNTRY, BUT THROUGHOUT THE WORLD.

AGAIN, I WOULD LIKE TO EXPRESS MY DEEP GRATITUDE FOR THE SUPPORT AND THE GUIDANCE THE UNITED STATES HAS GIVEN US IN THE PAST. I WOULD ALSO LIKE TO SHARE MY HOPE WITH YOU THAT, IN THE FUTURE, WE WILL ALL BE BLESSED WITH A DEEPER MUTUAL UNDERSTANDING. WITHIN THE GUIDELINES OF THE SPECIFIC TOPICS WE ADDRESS IN THE JAPAN-UNITED STATES RAIL CONGRESS, AND BEYOND THEM IN OUR ROLE AS NEIGHBORS ON A SHRINKING PLANET, WE WILL DO OUR UTMOST TO CONTRIBUTE TO THE FURTHER DEVELOPMENT OF BOTH THE UNITED STATES AND JAPAN.

THANK YOU VERY MUCH.

Representative REUSS. Thank you very much, Mr. Kato, for a memorable statement which tells us just what you've done as far as your willingness to help us, which we deeply appreciate.

I notice—and this is of particular importance to us of the Congress—that in a very real sense the Japanese high-speed passenger train is the product of the Japanese parliament, the Diet.

I would ask you whether that isn't somewhat unusual in Japanese political history, to have a whole new systems concept of this sort emerge not from the so-called government, the permanent bureaus, but rather from the committees of the Diet, sharpened and forged by debate in the Diet?

Mr. KATO. Mr. Chairman, I would like to say that the new Tokaido high-speed train and the Sanyo high-speed train were made as a result of those two lines coming to the maximum capacity in the past. Ten years ago, I was the person who proposed for the new high-speed passenger train network in Japan. As a result of my proposal 10 years ago, the new Tokyo line and the Sanyo line will be opened next year.

Representative REUSS. What struck me particularly, Mr. Kato, was the section in your prepared statement where you stated that you and the members of your delegation here in the Japanese Diet formulated and passed legislation directing the Japanese National Railroads toward a management policy that would focus on the bullet train and that it took almost 100 hours of debate for the Diet to enact this bill.

Is my impression correct that that represents in Japanese constitutional history a very high degree of participation by the Diet in a governmental program?

Mr. KATO. Mr. Chairman, I must say it is unusual, even in Japanese political history, that the Japanese Diet and Japanese Government cooperated so closely to create a new high-speed passenger train like the bullet trains. As a result of that, we are about to expand our bullet train network even further by building five more new lines, and even now many mayors and governors are bombarding our offices every day, begging us to create new bullet train lines in their jurisdictions.

Representative REUSS. That's always the penalty of success.

I thank you for making the point that you did, because if it was appropriate for the Japanese Diet to play the leadership role that you tell us it did, it is certainly at least as appropriate for the American Congress to attempt to play an identical leadership role for here.

At this point, let me recognize one of our leaders, Congressman Benjamin, for such questions or comments as he may have.

Representative BENJAMIN. Thank you, Mr. Chairman.

Have you as yet or through the Japanese National Railways exported any of your technology to other lands and actually worked with the implementation of that technology in the development of a high-speed rail system?

Mr. KATO. We haven't exported our engineering technology to other countries yet, but we have received many requests for advice and aid from those countries, including Iran and South Korea.

Representative BENJAMIN. You've had a very interesting and long-term relationship with our Amtrak. Have you during that relationship—and more specifically since the recent focus on high-

speed rail—discussed what parameters we would be utilizing in the United States that might not be true or realistic for Japan?

For instance, in Japan, I believe, you've looked at high-speed rail for distances or corridors of 120 to 500 miles. You've generally looked at trains in excess of 125 miles an hour and are now working on trains somewhere approaching 350 miles an hour. You've looked at a daily volume in excess of 300,000 passengers, as high as 800,000.

What type of figures do we generally have to look at to be as successful in operating a high-speed rail as you are, where you've obtained profits in the last 17 years of operation?

Mr. KATO. In Japan, we look at each locality and determine what type of transportation mode is most appropriate for each locality. Some localities may be served best by a Shinkansen type of transportation—in other words, a bullet type. Some areas should be served by something like subways, or other areas might be suited for airline services.

I'm sure that the best way for you would be for your Government and your Congress to get together and name your own plan. First you have to determine how many people you would like to move on a daily basis using the bullet type of train.

Representative BENJAMIN. One final question before returning this to Chairman Reuss. That is regarding the technology that is employed.

Is the concentration on improving the technology of the rolling stock, and is it the secret of the success of the bullet train economically and in your amazing safety record been the rolling stock, or has it been a heavy concentration on your railbed where it would require extensive labor and high cost of maintaining a good railbed?

Mr. KATO. I must say that our success has been based on the overall consolidated technology which includes not only rolling stock but CTS, ATS type of signals and also construction which can stand earthquakes at a magnitude of 8. So it is a consolidated technology which has brought success to our railway system in Japan.

Representative BENJAMIN. Thank you very much, and I look forward to working with these distinguished gentlemen from the Japanese Diet tomorrow.

I yield back my time to Chairman Reuss.

Representative REUSS. Thank you, Congressman Benjamin.

I would love to prolong this. There are many questions which suggest themselves from your excellent testimony. But I know that Vice President Bush is looking forward to meeting with you, and what with the afternoon traffic, I think it will take all of the time that we have to get you there.

So I'll say now, our deepest thanks on behalf of the U.S. Congress, our best wishes for a fruitful life for the Japanese/United States Passenger Rail Congress, and our gratitude to you for your real contribution this afternoon.

We look forward to meeting with you all on several occasions and furthering the great work which you've started this afternoon.

So the Joint Economic Committee will now stand in adjournment.

[Whereupon, at 4 p.m., the committee adjourned, subject to the call of the Chair.]

APPENDIX

BULLET TRAINS

Prepared For The
Japan-United States Rail Congress

Inaugural Meeting
November 5, 1981
Washington, D.C.

United States railroads have provided generous returns on investment through much of their history. In the past 20 years, however, these returns have sunk to inadequate levels--even to deficits in some parts of the nation. Conventional railroad systems in other countries have suffered a similar fate; in Japan, for example, 1980 railway system expenditures outstripped revenues by 821 billion yen, or $4.6 billion.

However, one sector of the Japanese system, the Shinkansen lines, has operated at a profit for the past 15 years. The first Shinkansen was opened between Tokyo and Shin Osaka in 1964, and profits from Shinkansen operation have been growing steadily since 1966. These trains cruise at 130 miles an hour between principal cities, making intermediate stops. The tracks, bridges, tunnels, signals, and other physical elements are designed as a single integrated system to ensure compatibility and efficient operation, to meet the special requirements associated with high-speed trains, and to provide traffic control and maintenance systems necessary for passengers' safety. (The Shinkansen system has carried more than 1 billion passengers without a fatality.)

Other nations have begun to build high-speed train lines. France's TGV supertrain, which serves the Paris to Lyon route, was designed for a cruising speed in excess of 160 miles an hour. British Rail's High Speed Train (HST) provides intercity service at speeds up to 125 miles an hour. The U. S. Metroliner, designed for speeds up to 160 miles an hour, serves the New York to Washington, D.C., route at the speed of 110 miles an hour. Amtrak is seeking permission from the U. S. Federal Railroad Administration to increase that to 120 miles an hour. Of all these, only the Shinkansen, because of its performance, has earned the name "bullet train."

Potential Markets

High-speed train systems are ideal for service in a particular transportation market: intermediate distance intercity travel. A substantial proportion of passengers for these distances travel on business, and therefore are highly time-sensitive; many others travel on personal business, or for pleasure. High-speed railways can offer substantial competition to other modes of transportation. Airlines find long-distance flights most attractive, in large part because their equipment is designed for such trips and their per-mile energy consumption declines as trip length increases.

There is, indeed, a natural division of the transportation market: long distances are efficiently served by air carriers, intermediate distances by trains, short distances by bus lines, and intracity travel by bus and fixed rail systems and the private automobile--a major factor in all these markets.

In the United States, several conditions combine to form a distinctive niche for a fast common carrier over intermediate distances. Deregulation of the airline industry has encouraged air carriers to concentrate on the long-distance market; the average flight length for U. S. passengers is now nearly 1,000 miles, and growing longer. At the same time, the average trip length for bus passengers is decreasing, to 100 miles or less. The high cost of gasoline, deteriorating highways, and tendency to smaller cars discourage the use of private automobiles for intercity travel. A high-speed railway could expect to draw passengers who are not now traveling, as well as many who are now using other modes of transportation.

The best location for a high-speed train, then, is a densely populated transportation corridor of 100 miles to 300 or 400 miles; ideally, the corridor would have well-spaced population concentrations at intermediate points.

Several U. S. transportation corridors appear to meet this test, including at least the following routes: Los Angeles to San Diego, Dallas/Forth Worth to Houston, Miami to Orlando and Tampa, and several routes from the Chicago hub.

Proven Technology

All high-speed trains travel at speeds well in excess of 100 miles per hour. Most are electrically powered. However, some systems are more developed than others. The British HST is successful, but lacks the fueling flexibility of electric systems. Britain's other high-speed train, the Advanced Passenger Train (APT), is still in the proving stage. France's TGV began service only in recent weeks and serves only the route between Paris and Lyon. And although magnetic levitation (maglev) trains may be successful in the future, they are still in the research and development stage. (Both West Germany and Japan have invested substantial sums in maglev research and development.) The one highly refined, systemwide, fully operational and thoroughly proven high-speed train is Japan's Shinkansen. The bullet train's lead over other high-speed trains is so marked as to preclude serious consideration of any other technology in a discussion of high-speed trains in the United States.

Because the Japanese National Railways (JNR) has 17 years' experience with the Shinkansen, engineering problems, construction schedules, and construction and engineering costs can be foreseen accurately. Proven safety and maintenance systems can be installed as the line is built. And engineering and management expertise will not have to be developed by trial and error; it is immediately available.

Feasibility Studies Are Under Way

It appears possible that the Shinkansen's profitability can be replicated in the United States. If so, private capital could be attracted to the project of building an American bullet train in sufficient amounts to eliminate the need for any direct federal government financial contribution. (State governments might assist such a project through providing loan guarantees, or by helping to secure rights-of-way.) Possible bullet train development in the United States has already interested a number of Japanese railway experts and financiers, who have first hand knowledge of Shinkansen's profitable operation. It will be necessary to test the assumptions that lie behind the expectation of profitability, and in fact these tests are underway.

The assumptions that are being tested in the first feasbility study, of the Los Angeles to San Diego route, will have to be tailored for each other proposed corridor. These assumptions form the bases of the projected costs, revenues, and profits of a U. S. bullet train. Estimates of these figures have been made for the California route as follows:

- Operating costs estimates -- these are based on current Japanese costs, except that labor costs are adjusted to U. S. levels: $113 million annually.
- Capital costs estimates -- these are based on current Japanese construction costs: $16 million per mile, or $2 billion over a 130-mile route.
- Ridership estimates -- these are based on a daily endpoint-to-endpoint market of 110,000 and a potential bullet train share of about 30 percent.
- Fares -- these are based on a rate that would produce an endpoint-to-endpoint fare below that of current line fares. Airline fares over this route now vary from $35 to $62.

Financing

The demonstrated profitability of the Shinkansen system should make its development in the United States attractive to private investors, especially in Japan and the United States. Considerable interest in the project already exists in Japanese financial circles.

Conventional railroads in the United States and other countries will continue to run at a loss. High-speed passenger trains, however, have an open market, a developed technology, and a record of profits. The introduction of bullet trains to the United States will affect the nation's transportation system to an extent unlike any seen since the beginning of commercial aviation.

TECHNOLOGY TRANSFER BETWEEN JAPAN AND THE UNITED STATES

Prepared For The

Japan-United States Rail Congress

Inaugural Meeting

November 5, 1981

Washington, D.C.

Japan and the United States are the world leaders in the high technology of computers, communications, microelectronics, and related fields. They have achieved this remarkable state by cooperation--usually informal--over the past three decades. Both societies have reaped rich rewards from this transfer of technology.

During the 1950s and 1960s, the United States moved ahead in technological advances in several fields. This effort accelerated greatly in the early 1960s, when the United States undertook the massive effort, managed by the National Aeronautics and Space Administration, to place an astronaut on the Moon and to explore outer space. The benefits from this effort were enormous: miniaturization of electronics, development of new metals and alloys, development of new uses of computers in research and management, and creation of whole new systems to integrate technological advances. The Apollo effort proved the value of long-term governmental and private sector joint commitment to a major program requiring vast research and development.

Japan made good use of American efforts in those decades, importing substantial amounts of advanced technology. The transfer represented profits for the United States sellers, some of which still benefit from royalty agreements included in those contracts.

Concentrating on a few fields, Japan went on to become a leader in certain high-technology industries, including speciality steel, precision machinery--and the high-speed passenger railroad. Japan still invests heavily in non-military research and development; only West Germany, among Western nations, spends proportionately more.

Japan now has taken a leading position with respect to particular technologies. For example, in 1980 there were 135 Japanese firms that manufactured industrial

robots or machines to operate other machines; there were only 40 to 50 such firms in all of Western Europe and the United States.

It is in the technology of high-speed trains, however, that Japan leads the world in transportation. This outstanding achievement required a massive infusion of public support and a NASA-like dedication and inventiveness. The transfer of this technology to an American railroad system that is ripe for its introduction represents a potentially new era in American railroading. Just as the Apollo effort invigorated the scientific and business communities of the industrialized nations, so the bringing of the Shinkansen--the famed "bullet trains" of Japan--to the United States could invigorate and revitalize the entire United States railroad industry.

The Shinkansen system is the product of ingenuity, persistence, and strong and enduring governmental commitment. It was designed from the ground up, resulting in a fundamentally new railroad system, complete with its own approach to track and signals, bridges, tunnels, maintenance and safety, communications, and other components. Less "technological" elements include specialized designs of reservation and ticketing systems, stations, and other aspects that affect passengers directly. The result is a highly efficient, extremely successful, fully integrated, and surprisingly profitable passenger rail system that presents a prime opportunity for large-scale technology transfer.

Railroad Technology in the United States

In the field of passenger rail service, the United States allowed its railroad industry to fall behind state-of-the-art technology during the critical decades of the 1950s and 1960s. The nation turned to the automobile, the airplane, and other modes of travel, virtually writing off commuter and intercity passenger rail service.

Beginning in 1971, with the creation of Amtrak, the nation began to rebuild its outdated passenger rail system. The task has proved to be a big one, and only recently has Amtrak begun to move into the arena of high-speed technology and advanced operational systems. A new "mini-era" began in late October 1981, when new schedules for Metroliner service between Washington and New York were inaugurated offering trip times of under three hours.

In the business of moving freight, however, the Americans have been pushing out the technological frontiers. The nation has long depended on a strong freight system to cover its vast area and to move critically important raw materials, manufactured goods, and other commodities. American railroad operators have become leaders in developing speciality freight cars, powerful locomotives, and methods of moving freight in the most expeditious and inexpensive manner.

Transfer Mechanisms

An early example of transfer of railroad technology was remembered in Washington last summer when the "John Bull," the British-built steam engine that inaugurated the rail age in America, was fired up and operated along a short piece of track for public view. The event marked the 150th anniversary arrival of the engine in the United States in 1831. The method of technology transfer was time-honored: a commercial transaction between the British seller and the American buyer.

The event also brought to mind a contact between Japan and the United States When Commodore Perry came ashore in Japan in 1864, he brought with him the first working model locomotive ever seen in the Orient.

Japanese and American businessmen now exchange information and innovative concepts on a regular basis, and many new organizations and media have developed to facilitate this exchange. The flow of innovative technology--and often of the associated operating and management techniques--has traditionally been accomplished by commerce. Import/export agreements, licensing arrangements, joint ventures, and other mechanisms of international finance and trade also have helped to open overseas markets to Japanese and United States companies.

Japanese National Railways (JNR), the national railroad company in Japan, is keenly aware of the advantages of technology transfer. It sends consultants abroad and accepts trainees from other countries as means of sharing its railroad engineering expertise. Although many requests come from developing countries, JNR extends technical assistance to developed countries--including the United States--as well. JNR operates through the Japan International Cooperation Agency (JICA) and the Japan Railway Technical Service (JARTS) in these efforts. Where appropriate, JNR establishes an indigenous organization in a host country; thus, it has created the Japanese Railway Technology Corporation (JRTC), which is an American corporation, to conduct certain business in the United States.

JNR is underwritten by the Japanese government, and JARTS is directed by the Ministry of Transportation.

No comparable effort at international technology transfer exists in the United States, but some signs indicate that it may be developing. Amtrak is taking the lead in exploring avenues of information exchange with Japan and other nations. Some privately owned American companies also are showing interest; the Thrall Car Manufacturing Company, a major United States producer

of freight cars, has signed an agreement in principle with Kawasaki Heavy Industries to produce passenger rail cars for the American buyer if certain conditions can be met.

The Climate for Technology Transfer

The most obvious potential impediment to the successful transfer of technology is an unfavorable national policy. At this time, neither Japan nor the United States imposes any restriction on the transfer of railroad technology between the two nations. Foreign policy considerations appear to favor the potential transfer of the Shinkansen technology.

Trade barriers also appear to present only a small problem. So far, for example, Japanese enterprises have been able to deal with the requirements of the "Buy America" provisions of the Surface Rail Transportation Act of 1978; they have demonstrated a willingness to meet, and sometimes to exceed, the requirements of the Act.

A potential barrier in cultural communication also seems largely absent from this field. Poor communications and lack of mutual understanding sometimes exist between Japanese and American businessmen, but seldom between scientists and engineers. High technology is now an international field, and its leading practitioners are members of the same profession, often graduates of the same universities, and sometimes students of the same teachers.

Conclusion

The current Japanese-United States cooperative effort to evaluate selected densely populated transportation potential corridors for a Shinkansen-like system dramatically shows the potential for technology transfer in the railroad field. It shows clearly that a proven technology exists, that the mechanisms for transfer exist, and that the resources to underwrite the transfer exist.

The crucial final ingredients to successful technology transfer have a broader thrust, however. Technology tranfer is a means, not an end. It can help to bring vast change in industry. But the industry--and the society--must want the change to occur. There must be pressure for progress, and a commitment to the sustained effort necessary to bring it about.

Trade between the United States and Japan is almost as old as relations between the two countries, dating back to 1868. While they have not always been without problems, overall economic relations between the two have been mutually beneficial. Each country has provided a needed market for the other's exports, and trade has greatly expanded the choice of products available to consumers in both countries. Other obvious benefits are the exchange of technology, the availability of outside capital, and the positive effects of healthy competition. Ultimately, trade has contributed to a better standard of living in both countries. There is now a consensus that the two countries will work out the areas of disagreement and continue this profitable interaction.

Japanese-United States Trade in Modern History

Japan has been a steadily expanding presence on the world trade scene for more than two decades.

A dominant theme in Japan's development has been the promotion of exports, and much government assistance went to those industries believed to have the greatest potential for foreign exchange earnings. This policy has been essential, given Japan's dependence on imports of raw materials, food, and fuel. Thus, one focus of economic development has been on increasing Japan's share of world markets, rather than on profits; another has been on high rates of savings and investment; a third has been on production of products with a high value-added factor. The third goal has been a necessity because to a large extent, the only goods Japan can export are those of manufacturers.

The Japanese government, like business, has been very forward-looking, trying to anticipate emerging competition with Japanese products and future consumer desires and then making the necessary adjustments. Both government

and business also tried to understand what foreign consumers wanted and to adapt their products accordingly. As such, Japan has been highly responsive to its markets. Finally, the government, along with Japanese companies, adopted aggressive marketing strategies in foreign countries.

Trade between the two nations reached a point of equilibrium in the mid-1960s, and then Japan pulled slowly ahead, where it remains today.

The United States in recent years has called for liberalization of Japanese trade policies. Internal pressures in the United States have sought protection for U. S. industry and those pressures have won victories in some key sectors, such as textiles, steel, and automobiles. Generally, however, the United States has continued its open trade policy. In most cases, controversies have been resolved without protectionist actions.

Both Japan and the United States were signatories of the Tokyo round of the GATT multilateral trade negotiations. These negotiations resulted in, among other things, an ambitious trade liberalization program involving major phased tariff reductions and a number of specific agreements, such as the government procurement code that opened up that category of purchasing.

A persistent theme in Japanese-United States trade relations has been the lack of understanding among government, businessmen, and the public of each other's systems and customs. Some American businessmen, for example, have tended to view Japan as a closed, inaccessible market. American firms that have come to understand Japanese production, distribution, and consumption, however, have found the nation to be a most amenable place to do business.

Similarly, some Japanese businessmen may not entirely understand United States labor relations, the role (or lack of it) of government in industry, the legal system, the use of economic policy in international relations, and the role of labor and the public in determining trade policy.

Those businessmen and observers who know practices and cultures of both nations attest to the fertile ground that awaits cooperative efforts in such fields as railroading.

The Current Situation

In 1980 the United States accounted for 25 percent of all Japanese merchandise exports, while Japan was the second largest market for United States exports, accounting for 10 percent of all its exports. Bilateral trade reached $50 billion in 1980, a 376 percent increase over 1970. The climate is very favorable for continued cooperation between the two and for resolution of outstanding and upcoming issues.

Many observers expect current trade patterns to continue in terms of products being imported and exported, but some new trends are also foreseen. It is likely that direct foreign investment in the two countries will increase. The future may bring some new approaches, such as joint business ventures. There may also be increased cooperation in research and development.

Prospects for Trade in the Railroad Industry

Traditionally there has been little economic or other interaction between the rail industries of Japan and the United States. In the past couple of years, however, the Japanese have made successful efforts to enter the United States market. They have bid on and won several procurements of rolling stock for metropolitan subway systems. They will be supplying light and heavy rail, as well as commuter cars; the car shells will be produced in Japan and assembled in the United States using United States components.

That approach will meet the minimum requirements of the Buy America clause of the Surface Rail Transportation Act of 1978, which requires that 50 percent of the value of a product purchased using federal funds must derive from the United States manufacture. Congress recently considered increasing the United States share to 70 percent, but left the law intact. The mood in Congress may reflect a larger public desire to protect United States industry, however, indicating growing difficulty for foreign competitors. One obvious alternative for foreign manufacturers is to locate their plants in the United States and use United States labor. It appears for the time being that prices of Japanese products will be fully competitive even when the manufacturer meets provisions of the Buy America legislation.

The Japanese are also involved in two other important ventures. The Japan Railway Technical Service (JARTS) is assisting Amtrak in feasibility studies of four potential bullet train routes, indicating the strong interest in Japan in exporting its world-famous Shinkansen system technology. In addition, Kawasaki Heavy Industries, the largest Japanese manufacturer of passenger rolling stock, has signed an agreement in principle with the Thrall Car Manufacturing Company, a major privately-owned United States maker of freight rolling stock, to produce passenger rail cars in the United States as a joint venture, assuming that certain conditions relating principally to profitability can be met.

Future Opportunities

As Japanese and American railroad interests explore areas of potential trade, they will inevitably consider the following factors:

- Markets. In the United States, there will be demand for about 350 passenger rail cars per year for the next decade. These will include light and heavy rail and commuter cars. Lack of standard design or pooled procurement may present problems. Limits on current domestic manufacturing capacity appear to offer opportunities for new companies or joint ventures to enter the United States domestic market, especially if Buy America provisions remain at least as strong as at present.

  In Japan, there would seem to be a growing major market for freight cars.

- Market Entry. Key considerations here involve the laws of the two countries. Another element involves the most appropriate form of investment--acquisition, direct export, development of a new company, or a joint venture.

- Business Practices. Successful ventures will require a clear mutual understanding of business practices and customs--and adaptation by both parties.

- Labor. The labor situation differs substantially between the two nations. In the Japanese railroad manufacturing industry, for example, significant flexibility in workers' tasks is common; workers also are more involved in quality control and shop-level management. Such a system depends on highly skilled employees who stay with one company for many years. In the United States, where interest in Japanese labor practices is intense at this time, there is growing understanding by labor organizations of the need for measures that increase productivity--such as those adopted in Japan. Thus, some convergence of approach seems evident.

- Technology Transfer. In addition to technology arising from or dealing with differences between the Japanese and United States rail systems, there are obvious large areas of technological interest common to the two countries. Transfer of knowhow, hardware design, and information generally could work much to the advantage of both countries.

Conclusions

The climate and conditions for Japanese-United States trade in the railroad industry are positive. Through JNR and JARTS, Japan is showing strong interest in exporting its passenger rail technology, manufactured products, and possibly capital. The United States, for its part, has a reservoir of expertise in the freight industry and a current excess capacity in production of freight cars, which Japan may need.

Recent changes in federal tax laws, which are part of the Reagan Administration tax reform program, offer attractive new benefits to businesses; these include accelerated depreciation for certain investments, and the opportunity to transfer tax losses through the lease of rolling stock or other assets. These and other aids to economic development, plant acquisition and upgrading, and capital investment should all contribute to an improved climate for Japanese-American joint efforts.

The "Wise Men's Report" of the well-respected United States-Japan Economic Relations Group has called for increased cooperation and understanding in trade between the United States and Japan. The railway industry would seem to offer excellent opportunities for the development of new trade and joint endeavors in the coming decade.

THE RAILROAD INDUSTRIES IN JAPAN AND THE UNITED STATES

Prepared For The

Japan-United States Rail Congress

Inaugural Meeting

November 5, 1981

Washington, D.C.

Japan has moved rapidly in the past 20 years to the forefront of the passenger rail industry, with an extensive, impressive, and technologically advanced rail network. Its world-famous Shinkansen service--the bullet trains--has proved profitable and extraordinarily safe.

Japan has five major manufacturers of rolling stock, a well-established national rail organization (Japan National Railways), and a promotional and consulting service, the Japanese Railway Technical Service (JARTS) that offers its services to other countries. Indeed, in matters of high-speed train technology, Japan has become the world leader, and provides consultation to and training for many nations interested in this technology.

Japan's freight industry has not grown or developed at the same rate; Japan may lack the current capacity to meet the increasing domestic demand for rail transportation of coal and other freight to produce domestically the kinds and amounts of rolling stock that the nation appears to need.

By contrast, between 1945 and 1975, the United States experienced a significant decline in its intercity passenger rail service. In the past five or six years, that pattern has been reversed, with growth in intercity passenger rail service and a resurgence in intracity commuter service. Regrettably, the legacy of decline is reflected in the still rather modest size and competitiveness of the U. S. passenger rail supply industry. On the other hand, the U. S. freight industry--although currently in a period of consolidation--has remained generally strong.

On the supply side in the United States, the picture is mixed. Only one manufacturer of passenger rolling stock, the Budd Company, is currently in business, and that company is foreign-owned. Several companies still produce freight rolling stock, and, indeed, the United States is a leader in this field.

The United States also has pioneered in specialty cars and freight locomotives. Amtrak has developed very strong expertise, particularly in the renovation and overhaul of older equipment, and in vocational training in skills important to railroading.

Because of conditions that prevail in each nation today, it would appear that substantial basis exists for exploration of undertakings that could be mutually profitable.

The Railroad Industries: Japan

The Japanese travel by rail. In 1979, both public and private passenger rail systems moved an estimated total of 18 billion passengers for a total of 310 billion passenger-kilometers. Japanese businessmen, vacationers, students, and others rely on the system for travel between nearby cities and between distant points.

Only a fraction of the overall use of passenger rail is on the Shinkansen. Indeed, Japanese National Railways (JNR), which operates the Shinkansen system, represents only a portion of the Japanese rail network, albeit the largest portion. There are also several important private railroads that move people, many of them workday commuters.

The Japanese passenger rail system in Japan consists of 3 major elements:

- Commuter trains: Very popular, these trains move a majority of Japan's urban workers from home to job and back each day.
- Conventional trains: These represent the bulk of the intercity passenger trains.
- High-speed trains: The Shinkansen system, linking Tokyo and Hakata, which moved 124 million passengers in 1979.

The conventional intercity passenger trains and the freight trains operated by JNR, while popular and operated in a manner to serve necessary economic and social purposes, are not profitable. The government underwrites the passenger service with an annual subsidy of $520 million. Railroad managers and political leaders face problems similar to those in the United States and Europe. For example, what is the appropriate level of governmental support? Should unprofitable lines be continued? What is the proper trade-off between purely economic considerations and social ends, such as increased personal mobility and preservation of the economic base of remote regions of the country?

In regard to high-speed trains, Japan is without peer. The Shinkansen system is distinguished from other systems by its experience; JNR has operated the line system for 17 years--for the past 15 at a profit. Shinkansen is a proven technology. It has moved more than one billion passengers without a fatality.

The general context surrounding the Japanese rail industry differs substantially from that in the United States. Until recently, for example, there has been little activity in the domestic airline industry; the Shinkansen system has been able to offer a more attractive mode of intercity travel. Some incursions from airlines are being noted at this time, however.

The highway system is drawing more governmental investment than it ever has before, but it is still not a national network of multi-lane, limited-access highways of the sort that exists in the United States and some European nations. The movement of freight by truck also does not approach that in the United States, in terms of market share. The intra-island transport of freight and people by ship, on the other hand, remains a traditionally strong part of the transportation industry as a whole.

The Railroad Industries: United States

Passenger rail service in the United States is handled almost exclusively by the National Railroad Passenger Corporation (known as Amtrak), which was established by Congress to assume operation of the nation's ailing passenger lines in 1971.

Freight service is provided by 40 operating railroad companies, which accounted for about 98 percent of all traffic, 94 percent of all mileage, and 92 percent of the workers employed by all railroad companies. The freight rail industry in the United States, as noted, is a major part of the transportation sector; some 28,600 locomotives and more than 1.7 million freight cars make up this large-scale capacity to haul freight.

Governmental policy toward the railroads has changed dramatically in recent years--one important change was the establishment of Amtrak itself. Also important has been the move toward deregulation of the industry, which represent a fundamental change in a policy of regulation that has existed since 1887. Because of the deregulation of ratemaking, for example, railroads are now better able to compete in the marketplace for business.

Passenger rail use in the United States is affected by a number of important factors, including:

- Developments in the airline industry, which has been experiencing sharply rising operating costs and dropping revenues from passenger business--despite recent deregulation.
- Rising costs of automobile fuel (notwithstanding a temporary surplus of petroleum on the world market), and the continued uncertainty of supply.

- Reduction in the size and perceived mission of the family automobile, which is becoming a "city car" more than a vehicle for use on long-distance trips.
- Natural limits on the ability of bus companies to expand their markets.
- Stated intentions of the Reagan Administration to generate revenues for public transportation through increased user fees.
- Uncertain future for some major providers of commuter rail service.

The cyclical nature of passenger rail business in the United States over the years has denied suppliers of cars a steady and predictable market.

Production of freight cars is currently in a downturn. A peak in production was reached in 1979, when manufacturers produced 1,791 new locomotives and 95,650 new cars. On average, 1,010 new locomotives and 67,818 new cars were produced each year for the years 1975 through 1979. Although higher than the average for 1975 through 1979, 1980 production fell behind 1979, 1,498 locomotives and 85,465 cars were produced. As a result, substantial additional capacity for manufacturing freight cars exists in the United States today.

Labor is a key factor in the U. S. railroad industry. The numbers of workers has been declining. More than 1 million people were employed in the American railroad industry 30 years ago; today, the workforce numbers about 400,000. Any analysis of the future of railroading in the United States must take into account the role of labor unions and their willingness to negotiate contracts that reflect changed working conditions, types of equipment used, commodities moved, and, in general, the competition facing the railroad industry.

Outlook

The railroad industries in both Japan and the United States appear to have challenging and promising futures, with many opportunities for expanded service to their nations. The conditions for mutually beneficial undertakings of railroad interests in the two countries may now exist. The expertise in Japan on the Shinkansen system, and the fruits of the impressive research and development efforts mounted in Japan, would seem to be of timely value to the United States. In turn, the capacity and expertise of the United States in freight rail matters would seem to be of timely value to Japan.

Three major areas of concern must be addressed in considering potential future cooperation between Japanese and American railroad interests. These are conditions of trade between the two nations, the transfer of technology between them, and possible application of the Shinkansen system to the United States. Separate papers address these issues.

Rockwell International Corporation
Corporate Headquarters
600 Grant Street
Pittsburgh, Pennsylvania 15219

Rockwell International

October 27, 1981

Congressman Fred Richmond
House of Representatives
Washington, D.C. 20515

Dear Fred:

Sorry that I am not able to attend your committee meeting in Washington on November 4. I have, however, taken your suggestion and put together a list of actions that I feel would have significant impact on improving the Productivity - Quality - and Competitiveness of Rockwell and the U.S. industrial base.

In most cases I have not spelled out specific legislation, but rather identified areas that need attention and focus - whatever form that takes. (The order presented does not indicate priority).

1. Employee Relations

   Reasonable and fair administration of requirements/practices relative to EPA and OSHA would be of significant benefit to both large and small corporations.

   Where it is demonstrated that an employer is complying with the spirit of the applicable legislation, a reasonable grace period should be allowed before another audit of the same facility is conducted. Also, employment threshold levels should be raised to exempt small unit employers from report filings. A large multi-plant employer, such as Rockwell, should be permitted to file single reports covering multi-facilities, thus reducing the administrative burden on our smaller plants.

2. Amend anti-trust laws which inhibit the growth of new technology within American industry.

   Enable U.S. firms to engage in cooperative technology projects which no single firm can undertake.

   Examples are the major projects in Japan sponsored by MITI in which several Japanese firms cooperated to develop the technology, i.e.:

   - LSI
   - Robotics
   - Flexible Manufacturing System
   - 5th Generation Main Frame Computer

3. Engineering Education

In my opinion, one of, if not the single most important factor in improving America's productivity in the 80's is, -- our technology base.

The universities which provide the raw materials (both students and research) needed to create and develop that technology are in serious trouble. Many of the major engineering schools in the U.S. (Purdue, Michigan, Penn State) are reducing the number of undergraduate engineering students due to lack of funds and qualified faculty.

At the time when our major international competitors are significantly increasing their commitment to engineering education our capabilities are on the decline. Lack of funds, lack of faculty (over 2,000 current openings for Phd. Engineering Professors) and outdated labs all combine to make the trend in engineering education a national crisis.

To put the crisis statement in perspective --- during this school year we will graduate 50,000 B.S. Engineering Degrees in the U.S., while in Japan they will graduate 90,000 in the same time period. Since in Japan they have essentially no defense industry, all 90,000 of these engineers will go to enhance their commercial economic system --- while in the U.S., approximately 50% of our 50,000 engineers will go to the defense industry, leaving 25,000 to compete against the Japanese and Germany in autos, steel, electronics, chemicals, etc.

Both industry and government must realize that in the highly technical world of the 80's and 90's, our scientists and engineers will be our first line of defense in the economic war.

4. Mantech and TechMod Programs

The intiative behind these programs is excellent. It provides a vehicle by which manufacturing technology can be developed on a shared cost basis.

In order to gain/obtain maximum industry wide benefits from these programs a way should be developed that shares the technical gains/leverage developed with commercial applications.

Also, the current method of shared cost between the government and industrial firms should be revised to a more realistic basis, i.e., the contractor's long term profitability on a specific program should not decrease because of a shared cost TechMod Program --- i.e., the General Dynamics F-16 Program. On the next phase of the program, the government's share of the productivity benefits should increase --- but the contractor should still receive at least 50% of the improvement benefits from the TechMod Program.

5. Labor, Industry, Government Cooperation

Labor, government and industry must all view the challenge of the 80's as an economic war. A war we are in, and are losing.

We must develop a cooperative, "Shared Bowl of Rice" attitude.

At Rockwell one of the things that we are doing to turn the adversary attitude is to send several of our plant managers and local union presidents to Japan to view first hand what we as a company and industry are up against. The bad guy is no longer the plant manager or the union steward -- but the people we compete against.

A second trip to Japan by national leaders in industry, government and labor would be of great value in my opinion.

Steve

S. D. Spence
Staff Vice President
Eastern Region Prod. Opns.

SDS/rmb