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THESIS

LITTON CROSSES THE RIVER

by

Robert E. Wideman

September 1976

Thesis Advisor: L. Darbyshire

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This paper examines some of the circumstances surrounding Litton's shipbuilding claims. It begins by discussing the business backgrounds of Charles B. Thornton and Roy L. Ash, the founding and development of Litton Industries, the founding and development of Ingalls Shipbuilding Company, and the acquisition of Ingalls Shipbuilding by Litton Industries. next page

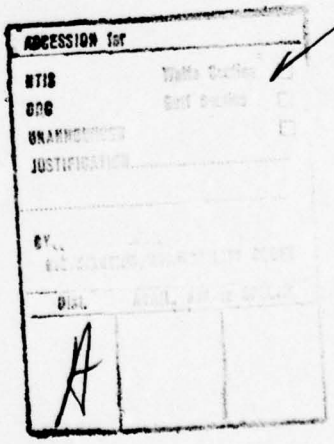
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LITTON CROSSES THE RIVER

by

Robert E. Wideman
B.A., Naval Postgraduate School, 1975

Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

This paper examines some of the circumstances surrounding Litton's shipbuilding claims. It begins by discussing the business backgrounds of Charles B. Thornton and Roy L. Ash, the founding and development of Litton Industries, the founding and development of Ingalls Shipbuilding Company, and the acquisition of Ingalls Shipbuilding by Litton Industries. Areas explored include the concept of growth by acquisition versus internal growth, the economic problems faced by the shipbuilding industry, the United States' position in the world shipbuilding market, and the concept of total package procurement as it relates to the U. S. Navy's ship procurement process. Finally, this thesis looks closely at the financing of Litton's new automated shipyard, the award of the amphibious assault ship (LHA) and DD-963 class destroyer contracts to Litton Industries, the cost overrun on the LHA program, and the testimony of Gordon Rule before the subcommittee on Priorities and Economy in Government.

TABLE OF CONTENTS

I. GROWING UP WITH TEX ---------- 7

II. A REBIRTH ---------- 19

III. INGALLS ---------- 34

IV. GROWING UP WITH LITTON ---------- 43

V. LITTON CROSSES THE RIVER ---------- 53

VI. GROWING UP WITH CONGRESS ---------- 69

VII. CONGRESS CROSSES THE RIVER ---------- 82

VIII. GORDON RULE ---------- 89

IX. CONCLUSION ---------- 95

APPENDIX A ---------- 106

APPENDIX B ---------- 108

APPENDIX C ---------- 113

NOTES ---------- 115

BIBLIOGRAPHY ---------- 119

INITIAL DISTRIBUTION LIST ---------- 124

PREFACE

It has been my intent to provide, by using information that has previously been made available to the public, a balanced perspective on the Litton shipbuilding claims problem. It is my fondest hope that future scholars, whose sources of information have not been limited to those in the public realm, will find this paper stimulating.

My most sincere gratitude is extended to Dr. Leslie Darbyshire, who suggested this topic, and Dr. S. Michael Dean for their timely and valuable criticism of the original manuscript.

My deepest affection and love is warmly conveyed to my loving wife, Patricia, whose understanding and patience was a continuing source of strength throughout the research and writing phases of this paper.

Special recognition is given to David Horowitz, Reese Erlich, Morton Mintz, William B. Harris, Richard Austin Smith, Jack B. Weiner, Charles J. DiBona,and Carl Rieser. Segments of their scholarly works, while not directly quoted, have been closely paraphrased to preserve the essential meaning.

Finally, I would like to express my sincere appreciation to the Navy's Fleet Introduction Team and to the Business Review Staff at the Navy's contract administration office, both in Pascagoula, Mississippi, for their warm cooperation.

It is suggested that the reader familiarize himself with Appendix A before reading the main text.

I. GROWING UP WITH TEX

On July 22, 1913, Charles Bates Thornton, "Tex" to his friends, was born in Haskell, a small north central Texas farm town located in Knox county. His father, Word Augustus Thornton, was a restless adventurer who ran off shortly after Tex was born. He accumulated a modest fortune as an oil well fire fighter only to lose it in the 1929 market crash. Tex seldom saw his father (later murdered by a hitchhiking couple he befriended) and grew up as the man of the family. Tex's mother, a firm woman determined that her son would not go the way of his father, drilled him in the manly art of finance. When Charles was 12, she encouraged him to use his earnings from odd jobs to buy land instead of childishly frittering it away. He eventually accumulated 40 acres, and at age 14 every store in town would accept his personal check. At age 19 he launched his first real business venture: a combination gas station and Chrysler-Plymouth dealership.

Later, he enrolled at the Texas Technical College in Lubbock, where he first matriculated as an engineering major but quickly switched to business administration (after all, the engineer works <u>for</u> the business man). In his junior year he quit Texas Tech to go to Washington, D. C. In 1934 he landed a $1,440 per year clerk's job at the Department of the Interior and continued his education at

night. In 1937 he received his Bachelor of Commercial Science degree. For four years he wasn't able to find that combination of business-military-political influence which was needed to power his ascent--until he found Robert Lovett, Wall Street banker and Assistant Secretary of War.[1]

Lovett was highly impressed with a report that the twenty-eight-year old Thornton had written on the financing of low-cost Federal housing. In this report, Tex had shown his considerable ability to reduce a massive amount of statistics and information to the basic essentials.

At Lovett's suggestion, Tex joined the army as a second lieutenant (pre-Pearl Harbor, 1941) and received his first promotion within 48 hours. A series of such promotions made him one of the youngest full colonels in the Army Air Force. He would at one time acquire as many as 2800 officers working for him around the world. Although Tex never left his desk, he received the Legion of Merit, a Commendation Ribbon with two oakleaf clusters, and the Distinguished Service Medal.

Among the officers who worked for Thornton were nine who were particularly adept with his new concept of statistical control. These nine, whose ages ranged from 26 to 32, were organized by Tex into a team--later known as the Whiz Kids--and offered to Henry Ford II when the war ended. Ford checked with Lovett and invited Thornton to

Detroit where salaries were negotiated and ranged from $8,000 a year for the least experienced to $16,000 a year for Tex himself. Ford didn't do too badly. The company got four future division bosses and two presidents (including Robert Strange McNamara who became Secretary of Defense on Robert Lovett's nomination). At 32 Tex became the Director of Planning, but his ambition brought him into collison with his superiors within a few years.

In 1948 Thornton offered his services to Hughes Aircraft where he was accepted with some reticence on the Company's part. Noah Dietrich, the financial head of the Company, strongly objected to hiring him. But he was overruled by two of Tex's old army buddies, Generals Harold George and Ira C. Eaker, who were on the board. Thornton was hired as assistant general manager of Hughes Aircraft, a division of Hughes Tool Company. The organization chart had it that he reported to Harold George who was the general manager of Hughes Aircraft. At the top was Ira C. Eaker, who was the Hughes Tool vice-president in charge of the Aircraft Division. As in other organizations, however, the organization chart was misleading. In a memo to Dietrich in September, 1953, Professor Harold Koontz, an authority in corporate management, said that Harold George was not running the plant, but rather he was a "pleasant spiritual leader who has furnished a symbol of unity...." According to Koontz, a setup of this sort "....invariably sets the stage where some aggressive individual runs with

the ball. We know, of course, that Thornton has been this individual."[2] Thornton himself acknowledged that the real power was his. "Most administrative and business management decisions were made in my office," he said in a letter to Howard Hughes. Ira C. Eaker described his own job as "liaison" with Hughes Tool. According to Noah Dietrich, both generals were mere "customer relations" men who weren't very knowledgeable about accounting or corporate management.

After Tex took charge of operations he hired Roy L. Ash, a Bank of America statistician with no accountancy training, to be assistant comptroller ("Who's Who in America" listed him as chief financial officer). Ash had been one of Thornton's subordinates during the war. He was born in Los Angeles on October 12, 1918. During the Depression he couldn't afford to go to college and was holding down a clerical position at the Bank of America when he enlisted in the Army during World War II. He was assigned to the Army Air Corp Statistical Control Service where a group of officers, including Robert S. McNamara and Charles B. Thornton, were revamping procurement along business lines. As the only enlisted man in the group he was encouraged to go to officer's candidate school, an experience that was a major milestone in his career. During the war he was invited to attend Harvard's Graduate Business School, where the Air Force group had been based. Although he did not have an undergraduate degree when he entered Harvard's

Graduate program after the war, Ash completed the two-year curriculum in a year and a half and was graduated first in his class in 1947 as a Baker Scholar, the school's highest academic award. He rejoined the Bank of America in San Francisco where he worked in the statistical department until Thornton hired him in 1949.

On the organization chart, Ash was subordinate to the division comptroller, William B. McGee. However, Ash reported directly to Thornton several times a week. Ash was Thornton's man and in 1951 this was made official by Thornton who designated Ash as "acting comptroller." Although Ash was not an accountant, he was in charge of accountants, one of whom was James O. White, chief accountant in the comptroller's organization. In 1951, White began to notice irregularities in the inventory accounts and reported them to McGee. At first McGee thought the irregularities were the result of errors but became convinced later that they were deliberate. White continued to complain to McGee until McGee finally told him that "Roy Ash was now in charge" and that he should "accept his orders." This eventually led to violent arguments between White and Ash; and also between White's immediate superior, Bill Ryker, and Ash.

What happened was that Hughes Aircraft's accounting department had lost track of costs under an Air Force fire control contract and had submitted false affidavits to the Air Force for progress payments to cover the costs incurred. Thornton and Ash had found out about this, but

rather than put a stop to the procedure, they encouraged it. In order to support the false affidavits, Ash ordered his accountants to over-credit the inventory accounts --that is, to make entries saying that more material was taken from inventory than was actually the case. This came to White's attention when the inventory accounts began showing credit (negative) balances which indicated that more material was being used than was in existence, an accounting impossibility. Again, there were only two possible reasons for this phenomenon: first, an error had been made, or second, it was deliberate. Due to the extended period for which the inventory accounts had shown negative balances, the possibility of error was ruled out. In a situation such as this, a negative inventory account indicates that something is very wrong and corrective action should be immediately forthcoming. The inventory accounts for Hughes Aircraft had been showing "credit balances" for a number of months, but Ash kept telling White to make additional entries in these accounts. White replied that that was impossible. Ash said, "Make the entry anyway."[3]

To further promote the look of authenticity, Ash would bring his cost accountants in during the nights and on weekends to fill out false requisition slips for the material that was being over-credited. In addition, the slips were wrinkled and dirtied to make them look as though shop people had actually handled them. The Hughes Aircraft inventory had been under physical control prior to 1951 (inventory had

been kept in locked cages and issued to shopworkers by authorized personnel in the cages in return for requisition slips). In 1951 Ash ordered an end to the physical control of inventory which resulted in an incommensurability between parts being taken and requisition slips received. This is what triggered the use of false affidavits to the Air Force to cover the cost of the unaccounted parts. The result was that the cost of the weapons systems was inflated to the Air Force and that additional profits were being hidden in the inventory accounts. This enabled Hughes Aircraft to operate at what appeared to be a 10 percent profit as stipulated in the contract. When White pointed out to Ash that there was a proper way to handle inventory shortages by writing them off, Ash replied that he wanted to do it this way. To further increase the amount of money received from the Air Force in the form of progress payments, the percentage of work completed had been inflated on the affidavits presented to the Air Force. Ash's reason was "so we can get the money....Tex wants to get the money, and we're to do it in any way we can to get it."[4]

In the reports to Hughes Tool, however, Ash told White to post entries that would cancel the previous over-crediting in the inventory accounts. This made the Aircraft Division's profits look higher. White would receive an order from Ash to debit inventory and credit cost-of-sales. The entries were false. A few hours later White would receive the entries from Ash and the figures were just

right to balance a predetermined profit. When White protested, Ash told him that he ought to take his orders like "a good company man."

However, White was a good company man, and he perceived Ash as being a good division man not working in the best interests of Hughes Tool, the parent company. In 1951 White, Ryker, and three other CPA's contacted Frederick J. (Jack) Strickland who had headed a team for Haskins and Sells, an independent firm of CPA's, which audited Hughes Aircraft during the first half of 1951. At that time certain crucial records were missing. Now, through the "revolting" CPA's, these records were secretly smuggled out to Strickland who had left Haskins and Sells to work for Roy N. Sherwood, comptroller of Hughes Tool's West Coast operations. Strickland revealed his finding to Sherwood and also to Noah Dietrich who was getting additional information from Malcome Devore of Haskins and Sells and from A. V. Leslie, Hughes Tool's vice president for finance, concerning irregularities in the accounting system. After Dietrich sent Strickland to the aircraft plant to gather more information, he (Noah) summoned Thornton and confronted him with what the CPA's had disclosed. Thornton said that the contract limited them to a 10 percent rate of profit, and that the books were adjusted to reflect that rate. Dietrich informed Thornton that he had been improperly borrowing money from the Air Force without paying interest for its use.[5]

Previously, the CPA's made it known that they would quit if Thornton and Ash weren't fired, and being assured that Thornton and Ash would be let go, the CPA's agreed to stay on. However, Howard Hughes refused to give Noah Dietrich the authority to fire the pair. In October, 1951, Dietrich confronted Thornton with a copy of a request for progress payments backed by a false affidavit. Thornton claimed that all defense contractors were doing the same thing, and that he saw nothing wrong with the practice. This was essentially the same reply that the five CPA's received from General Harold George, supposedly the head of the division, when they went to him with the problem earlier.

On November 1, Ash barred Strickland from the plant after hearing about his contacts with the CPA's.

On December 4, Haskins and Sells presented to Dietrich a memo on the Aircraft Division's records and observations based on statements by division personnel. Concerning Thornton, the memo said that he "is unprincipled and ruthless and is universally disliked..... cannot be trusted." Ash, it said, "appears to be rather deeply involved, directly or indirectly, in the deception."[6] (Ernest Breech, executive vice president of the Ford Motor Company, had, moreover, described Thornton, a past employee, as overly ambitious and not trustworthy).[7] In addition, the memo stated that division management sees its interests as "separate and apart" from Hughes

Tool. Ultimately, Haskins and Sells refused to give the division a "clean audit," ultimately causing the Mellon National Bank to refuse the renewing of a $35 million loan.[8]

In a memo to Comptroller McGee, on December 20, Ryker said that 23 defects in the accounting system had been isolated and were ready for remedial action "if we receive the promised cooperation and authority." He never received it. On January 6, 1952, Ryker and White drafted an "ultimatum" letter to Dietrich. The next day, they told an official from Haskins and Sells that they intended to resign. The final ultimatum was delivered to Dietrich on January 11, and it said the five CPA's would resign to protect their reputations as accountants if the delays in firing Thornton and Ash continued. Dietrich had the CPA's in for a talk after he received their ultimatum, and it was then that they told him the Air Force had been overcharged millions of dollars and that the possibility of being held accountable for fraud couldn't be ruled out.[9] Dietrich asked the CPA's to stay on for a few more months until he received the authority from Howard Hughes to fire Thornton and Ash. Later, Dietrich called Thornton into his office to discuss the problem further. During the conversation Thornton made the statement "Noah, I want to tell you in confidence that we are actually making more than 30 percent on this contract, and in order to keep it, we are going to have to hide it some place, and the best place to hide it is in the inventory account."[10] When Thornton was confronted

with evidence of the Aircraft Division's phony financial statements to Hughes Tool, he didn't deny it. When Tex was told about the CPA's threat to resign, he told Dietrich to stay out of it for it was a division and not a Hughes Tool matter.[11]

Meanwhile, General Eaker talked to the five CPA's one at a time in his office to try to talk them out of resigning, but he failed. On January 23, 1952, the five men sent Eaker their letters of resignation. Later, two more CPA's resigned. Thornton and Ash remained. In June, Thornton, General George, and two scientists sent a letter to Howard Hughes himself. In the letter they accused Dietrich of attempting to "seize personal power without regard to the consequences to this company" and of entering into a "plot" that could have "seriously injured our national security." Despite this counter-move, Dietrich wanted a token refund made to the Air Force of $5 million pending a determination of the actual amount owed. Thornton resisted.[12] In early 1953, Barry Shillito, an Air Force contracts officer, threatened legal action. The Secretary of the Air Force, Harold Talbott, gave Howard Hughes an ultimatum: "Either change your management or sell the company. By God, I'll give you 90 days."[13] By the summer $5 million had been paid to the Air Force. Thornton said it was voluntary, Dietrich said it wasn't. On September 1, 1953, Howard Hughes locked Thornton and Ash out of their offices. Dietrich finally received the authority to fire the two

men. By early 1954 Hughes Aircraft had paid back $43.4 million to the Air Force as determined by a Haskins and Sells audit that had been completed on October 31, 1952.[14]

II. A REBIRTH

A characteristic common to many successful businessmen is the ability to turn misfortune into opportunity. Tex Thornton and Roy Ash possessed this ability. During the time they were being forced out of Hughes Aircraft (Tex claims it was voluntary), a massive walkout of disgruntled higher eschelon executives and engineers was taking place. Many of these men went on to find such conglomerate superstars as TRW and Teledyne. Thornton and Ash managed to lose themselves in the shuffle. In addition, they were able to take some talent with them: Emmett Steele, Hughes' lobbyist in the Pentagon, became Tex's sales manager; Hugh Jamieson became his top engineer.

In order to establish a base, Tex set up his own organization, the Electric Dynamics Corporation. In the meantime, Charles V. Litton, having suffered a family tragedy, was ready to sell his small electronics firm, Litton Industries, located in San Carlos, California. It was a small micro-wave tube company that had supplied Hughes with magnatrons--vacuum tubes that emit radar impulses. At first, Litton was reluctant to sell to Thornton. He apparently thought Tex was untrustworthy and broke off negotiations at one point. However, Jamieson and Steele talked to Litton and convinced him to sell. All that remained was the financing. After an unsuccessful solicitation of Industrialist Joseph Kennedy, Tex went back to

Robert Lovett and the Lehman Brothers investment banking house. In his sales pitch he told them that he wanted to start a balanced company that would become strong in the technical environment of the future. He projected sales of $100 million in 5 years. The Lehman partners liked his ideas, but they thought his sales forecast was unrealistic. Nevertheless, Joe Thomas, a Lehman partner and a fellow Texan, agreed to provide $1.5 million to buy Litton, in exchange for 75,000 of the original 575,000 shares. Lehman received an option for 25,000 shares, and 450,000 shares were reserved for management. The $1.5 million was raised by selling 50 investment packages to wealthy private investors. Each package consisted of stocks and bonds worth $29,200. Common stock cost Lehman's investors ten cents a share. With the money in hand, Tex Thornton purchased Litton Industries. Charles Litton insisted on taking his $1 million in cash only. He would not accept Litton stock.

For the fiscal year ending July 31, 1954, Litton Industries had approximately $3 million in sales and $154,000 in after tax profits. At that point the company had only two growth alternatives. It could grow internally by investing its earnings in assets such as inventory, plant and equipment, or research and development. Expenditures of this nature would expand her existing operations and would provide the company with an increased capacity to produce more goods for the marketplace. Growth through

internal means would be a gradual process, however, because the firm would normally seek natural growth in areas where it had an established position.[1] Thornton felt that Litton had to grow rapidly to survive the future technological changes in the business environment. "We had to grow fast," explained Tex. "There wasn't time to learn a business, train people, develop markets.....We bought time, a market, a product line, plant, research team, sales force. It would have taken years to duplicate this from scratch."[2]

Litton, therefore, chose the second alternative: growth through acquisition. Growth through acquisition, or merger, is accomplished by acquiring the existing business activities of another firm. This is most frequently achieved by acquiring all or a substantial portion of another firm's voting stock. There are several ways for an acquiring company to gain possession of another firm's stock:

> The stock may be obtained in a private negotiation between the acquiring company and a single owner or small group of owners. In the case of a publicly owned company, the stock may be purchased gradually on the open market at the market price in effect at the time (this tends to drive the price up significantly). It may be purchased by a public offer to buy all or a stated number of shares of the company at a price which is usually above the market price (tender offer). This offer may be made with or without the knowledge and blessing of the management of the company to be merged. As an alternative to the payment of cash for the stock, the acquiring company may offer its own stock in exchange at a ratio which is expected to be attractive. In this way the shareholders of the merged company become shareholders of the surviving corporation. Apart from the possible advantages of the

> exchange itself, there may be considerable attraction in becoming a part of a larger and more diversified organization.[3]

Growth by acquisition through an exchange of stock is particularly attractive to a company whose stock has a large price/earnings ratio (P/E). If the company to be acquired has $10 million in cash, and its stock has a P/E of 5, then a company whose stock has a P/E of 20 can acquire that cash (and all other net assets) for much less paper.

With her course charted and her stock available for exchange, Litton began to acquire other companies.

By July 31, 1957, growth from Litton's internal operations still exceeded that from acquisitions. Total sales for fiscal year 1957 were $28 million with $17 million generated internally. Her stock was earning $1.50 per share. In July, 1957, Litton's stock was traded on the New York Stock Exchange for the first time and at one point (prior to April, 1958) sold for thirty-seven times earnings. The stock traded in the $35 to $45 range.

By July, 1958, Litton had acquired seventeen other companies. Most were little known outfits that manufactured printed circuits, computers, servomechanisms, communication equipment, and navigation gear. Of the seventeen acquisitions, the Monroe Calculating Machine Company of Orange, New Jersey, was the largest with sales in excess of $40 million per year. Ninety-nine percent of Monroe's products were mechanical desk calculators and didn't seem to fit

with Litton, a corporation engaged in advanced electronics. However, Monroe had been founded in 1912 and, with the single exception of 1932, had been profitable every year since. Furthermore, Monroe had a well developed distribution system that Litton would need to market a new line of commercial electronic computers. Litton also saw a valuable asset in Monroe's 350 U. S. factory sales and service offices. Monroe became a wholly owned subsidiary of Litton in early 1958.

By July 31, 1958, Litton's sales were close to the $100 million mark. After taxes, profits were running at $4 million. Of the $97 million increase in sales since July, 1954, however, only $11 million had been due to sales from the original company. The remainder had been due to sales from the seventeen acquired companies.

Charles Litton's company employed 250 people when Tex Thornton and company purchased it. It had been supplying Hughes Aircraft with the best magnatrons available at very competitive prices. The reason, according to Dr. Norman Moore, the president, was that their scrap rate was only 15 percent as compared to 40 percent for some of their competitors. In addition to Norman Moore, an expert in the tube making business and a competent salesman, Thornton got a top engineer and designer, a production chief, and a general manager. This was fortunate because Tex had no intention of running the San Carlos plant himself. Instead, he instructed that it grow. By April 1958, it employed

about 1,000 people, its sales were approximately $14 million, and a new plant had been opened in Salt Lake City.

Litton's executives were young people with bold, innovative ideas. The average age of the top ten executives was forty-three, and the average age of the more than 100 people who participated in the company's incentive stock plan was less than thirty-seven. Litton's executives were comprised of scientists and engineers who could transform their technical knowledge into industrial products with an electronic base, and businessmen who knew what the scientists and engineers were talking about and had the commercial instinct to choose and advance the products that were most likely to succeed. The executives were young mainly because their areas of expertise were quite new (advanced physics as it relates to electronics). Two years prior to Sputnik, Litton used its own money to set up a space research laboratory. The company and its people learned a great deal about electronics from the research that was done here. According to the original plan devised by Thornton and company, the goal was to make Litton competitive with any company in the United States, regardless of its size, in the field of advanced electronics. To achieve this goal, Litton chose to enter the field of space technology by building electronic gear for missiles. This was the most complex of all industrial endeavors, and a company that could succeed in building this kind of electronic gear could succeed in building anything.

At Hughes Aircraft, the founders of Litton Industries had learned what they could do. There was a big difference, however, between the environment surrounding Hughes and the one surrounding Litton. Hughes, having been the first company to participate in missle work essentially had no competition from without. Hughes had to design and build its own components as they were not being manufactured by other companies at the time, for these other companies were not yet, in 1946, interested in government work. Consequently, Hughes became by necessity an integrated manufacturer of advanced electronic equipment. It was here that Litton's founders had gained their knowledge. This, unfortunately, was where the strengths ceased for in 1953, when Litton was founded, practically all electronics companies were deeply involved in government contracting. It would have been a rare procurement officer indeed who would have let a contract to a young, untried electronics company like Litton Industries. To survive, Litton had to build high precision electronic components. From a commercial view, then, Hughes was paid to learn while Litton had to earn for its knowledge. Tex knew that the larger electronics companies (G.E., R.C.A., Sylvania, etc.) were fighting for government work among themselves, and that size was an important factor in succeeding. He knew that he didn't have much time, and he also knew that bankers were not usually receptive to entrepreneurs groping at full speed.

In the quest for technical talent, however, Litton was not at a disadvantage because competition in advanced electronics was essentially a competition for brain power. Although good technical talent did not come cheap, it was not beyond the financial means of small electronics companies like Litton. In addition, many of the "big brains" in electronics preferred the intimate atmosphere associated with the smaller companies. As Roy Ash once put it, Litton's principle job is "to attract brain power and to continue to be attractive to it."[4] And moreover, the founders of Litton themselves were not lacking in the talent commodity they sought. In addition to being hard workers, they each had their own area of expertise which was utilized extensively during periods of merger, acquisition, or market expansion. When the company was looking to new markets, it was Jamieson who advised the rest on what it would cost in the way of research and production, and also what lead time would be required for manufacturing. If the new move was the acquisition of another company, Jamieson would analyze the technical aspects of their operation and give his recommendations. Ash and Thornton would plan the financial and negotiating strategies with Tex calling the shots in the actual bargaining process. By April, 1958, Litton was being offered about ten merger proposals a week, most of which were unsuitable.

A breakthrough for Litton came in the field of navigation where the military dictated its requirements for an inertial-guidance systems in 1950. Although numerous devices were developed that worked, none had reached the production stage because they were too complex, unreliable, and weighed too much to install in aircraft (all weighed from five-hundred to one-thousand pounds). In 1954, Litton started an inertial-guidance project under the direction of a Dr. Henry Singleton. Singleton had previously been a faculty member at M.I.T. and was hired by Litton while he was still on the payroll for North American. Within three years Singleton, working with only six scientists and engineers, designed the equipment for a practical inertial-guidance system. The device weighed fifty pounds and the April 1958 price tag was $300,000. On a production lot of 500 or more, however, the price could be reduced to around $60,000 per copy. In April of 1958, the first production run was under way to fulfill the first order of inertial-guidance systems that would be installed in intermediate-range missiles. As a spin-off, Litton was selling the gyro equipment in the system to a manufacturer of ICBM's and the computer to another manufacturer. In order to establish a proprietary position in the field, Litton had to put up its own money for the project even though companies such as General Electric, Sperry Rand, and Minneapolis-Honeywell had already contracted with the military to develop such a system using government funds. Litton's successful

development of the inertical-guidance system supported Tex Thornton's conviction that a company didn't have to be large to attract business in the electronics industry where the basis of competition was brains.

At the same time that Litton began its inertial-navigation system, it also started a project that would thrust it into the computer field. One reason why Litton started to develop a digital computer in May of 1954, was that it realized then that a company attempting to progress in the advanced electronics industry was going to have to become highly competent in computer techniques. Thornton and company entered the computer field much the same way they entered the inertial-guidance and other fields. They chose an individual to head the project and instructed him to obtain the best digital computer group he could find. The man they chose was George Kozmetsky, then a thirty-six year old Harvard Business graduate with a Doctorate in Commercial Science. Kozmetsky was chosen, rather than a physicist or mathematician, because Litton wanted to eventually enter all computer markets, and Kozmetsky had studied these markets at Hughes, where Thornton had known him.

In May, 1954, Kozmetsky started the project with one assistant. By April, 1958, the department numbered 150 and had been engaged in profitable military work since 1955. In addition to digital computers, the department had also developed three electronic desk computers called digital differential analyzers (D.D.A.'s) for engineers and

universities. The inventor of the D.D.A. was George Steele, a highly controversial figure in the computer logic field. Steele was acquired by Thornton in 1954, at Kozmetsky's urging, when the company employing Steele was bought by Litton. Steele was controversial because he felt that the computer field was suffering from "hypercomplexity."

> "The massive general-purpose computers," said Steele, "now sold for business data processing are not general-purpose at all. All they can do is high-speed calculations, and that's not general. Furthermore, only the universities really need this kind of speed--1,000-odd numbers a second. Certainly most businesses, which originate numbers only occasionally as fast as three to five per second, do not need it. For most businesses the G.P.C. is simply a monstrosity.[5]

Thus, having discerned a need, Steele conceived and developed a small lightweight airborne computer that integrated well with Litton's inertial-guidance system. The next problem was how to transfer airborne computer technology to business uses.

The progress that Litton's computer division was making with D.D.A.'s lead her in the direction of the Monroe Calculating Company. In addition to furthering expansion, Monroe offered a ready-made distribution system for the new commercial electronic computers being developed by Litton. Litton's progress with electronic computers, on the other hand, would enable her to provide electronic products to Monroe in a shorter time than could her own research department. In January, 1958, a common and

preferred-stock trade, based on an estimate of each company's position in 1960, was completed. One share of Monroe stock (earning $6 in 1957) was traded for one and a half shares of Litton (earning about $1.50). By April, 1958, Monroe was being run like all other Litton divisions--as an autonomous operating unit. Its boss was Fred Sullivan who had been Monroe's president prior to the merger.

Although intuition, acquisitiveness, and hard work had played an important role in Litton Industries' early growth, her ability to attract and retain top executive talent throughout that developing period should not be under-emphasized. Her top engineers and scientists were rewarded by being allowed to work in small teams where each individual could see for himself the extent of his contribution. Furthermore, there was no engineering department as such, but rather each technical project had its own research and development group that saw its own product through to production. Included in Litton's "reward package" was a very generous stock-option plan that made other incentive schemes look miserly. When Thornton was at Hughes Aircraft, he understood well the frustrations encountered by an ambitious man who was denied ownership in the company he worked for. To alleviate this frustration, Tex set up a stock-option plan after he founded his company. Thornton, Ash, and Jamieson bought 275,000 shares of Litton stock at 10 cents a share. This block of common stock was designated "partners' stock." Options on it were awarded

to key executives, scientists, engineers, and technical personnel according to the following: a selected employee took an option on a block of "partners' stock" at a significant discount from the market price. The number and price of shares were decided by the "partners" (in April, 1958, the "partners" consisted of over 100 people). The options were then "picked up" over a five year period, after which the stock was owned by the selected individual. If he quit before five years, he was required to sell the stock back to the partners at cost. The plan tended to perpetuate itself because money received from the employee was used to buy more stock on the market. Litton did not have problems associated with top talent leaving to work for another company, and taking valuable competitive information with them. Yet, Litton did not hesitate to use this incentive to lure talent away from other firms.

As of April, 1958, Litton's financial position could be described as comfortable. Its asset base was enough to support expansion, and its cash flow included <u>all</u> after-tax earnings. The Company, moreover, did not pay cash dividends. Her $2 a share earnings level on 1,680,000 shares of common provided her with about $5 million in cash annually (depreciation included). In the steel industry, this would have been trivial, but in electronics, where the need for capital funds was not great, it was considered to be significant. More than half of Litton's

long term debt of $12 million was considered an asset as it represented low-rate loans with low repayment requirements. Her total long-term debt was less than half of her net equity which amounted to over $30 million. In addition, Litton owned most of her buildings. Sale and leaseback of them could have freed more cash. Finally, more money could have been borrowed provided her earnings continued at a satisfactory rate. But despite those obvious strong points, Litton's path was not all bright at the time. She was only beginning to get into big government contracting and had to outbid firms like R.C.A., Sperry Rand, and G.E. in order to get the crucial missile contracts of the future. Not only was she just entering the government market, but she was new to the commercial market as well. In addition to these strategic problems, Litton lost two key men by October, 1959. Hugh Jamieson, Litton's chief engineer, resigned in 1958 to form Jamieson Industries Incorporated, a small electronic component manufacturing firm located in Los Angeles. There were numerous reasons for Jamieson's departure, but two appeared to predominate: first, Jamieson thought that Tex was driving too hard a pace; and second, Jamieson's desire for a more centralized engineering department ran counter to Tex's policy of maintaining a decentralized organization for operational purposes.

The other person to leave was Emmett Steele. In October, 1959, Steele filed suit against Thornton, Ash, and Jamieson.

In the suit, Steele claimed that he was a co-founder of the company and that he had been deprived of stock that had been promised him. Jamieson, dissatisfied with his share, also suied Thornton and Ash. However, Jamieson's suit was settled out of court for an undisclosed amount estimated between $3 million and $20 million.[6] The Steele suit, on the other hand, was destined to haunt Thornton and Ash for the next fifteen years.

II. INGALLS

Ingalls Industries had its origin in an old iron shop in Birmingham, Alabama in 1910. "I started out in Birmingham," claimed Robert Ingalls, Sr., "with one negro, one mule, a busted crane, and the [Twenty-sixth street] viaduct for a roof."[1] Originally an ironworks, Ingalls Industries diversified into the steel shipbuilding industry in the early 20th century. This was a common phenomenon in America around the turn of the century, because steel ships required more organizational and technical competence than was present in the wooden shipbuilding companies that were patterned after simple, Thomas Jefferson style, free enterprise operations. It was the American steel companies that built the steel-hulled ships rather than the wooden shipbuilding companies which eventually were, except for a very few, forced out of business. Robert Ingalls Sr. entered shipbuilding primarily because his son, Bob Jr., persuaded him to do so. The Decator Barge Division was established along with a shipyard in Chickasaw, Alabama where the United States' first all-welded tanker was built in 1936. Bob Sr. was gratified by the fact that his shipbuilding operations had turned out to be more profitable than his ironworks, so he was ready to bid for contracts when the government announced its plan in 1938 to build fifty ships a year for ten years.

Monro Lanier, an important personality in Ingalls' shipbuilding subsidiary, was instructed to bid on four of the Maritime Commission's C3 cargo ships. However, Lanier realized that if Ingalls received the contract, the company would have to build a new yard to handle the construction of the 12,500 ton ships. With the support of Bob Jr., Lanier asked for $1 million dollars to build a new yard. At first Bob Sr. said no, but Lanier eventually persuaded him to commit the yard at Chickasaw and the barge division at Decatur. From the barge division, Lanier got the collateral for a $1-million bank loan. From the yard at Chickasaw, he got enough equipment to make a start on the fifty acres purchased in Pascagoula, Mississippi for the new shipbuilding yard on the east bank of the Pascagoula River. Lanier got an $11-million contract on four C3's for Ingalls, but it was unlikely that the small company would ever be able to finish such massive projects.

Fortunately for Ingalls, Lanier found out that Bethlehem Steel was getting ready to buy United Shipyards located on Staten Island. Because Bethlehem Steel had a policy of not rehiring any employee who had left the company voluntarily, and because many personnel working at United Shipyards had voluntarily left Bethlehem Steel's shipyard in Quincy, Massachusetts, Lanier was able to get some badly needed talent. From United Shipyard he quickly acquired a general manager, a chief naval architect, and the heads of hull, machinery, electrical, and other divisions.

Blessed with this windfall of shipbuilding personnel, the yard at Pascagoula began to build ships at the same time it was building itself. Keels were being laid on ways while other ways were still under construction. Ship subassemblies were fabricated in the ironworks at Birmingham and then transported by freight train to Pascagoula where they were incorporated into the final product. Bob Sr. took early morning trips to the new yard from Birmingham to personally check on the new operation. When the dust finally cleared, the shipbuilding subsidiary had produced four well-built ships, owned its four ways, repaid the $1-million bank loan, and deposited more money in the bank. Of the 184 vessels built in this category by 1947, Ingalls built eighty of them.

In 1951, Ingalls got its first U. S. Navy contract by purposely bidding below cost for five LST's. Although it lost heavily on the first ship, by the time all five were completed, the books were out of the red due to the learning curve (increased labor efficiency and decreasing costs). In addition, Ingalls was the first of several yards building that type of ship to complete its contract. Now that the Navy market had been entered, Ingalls looked toward the most prestigious navy work, that of building destroyers and submarines. To win favor for these contracts, Lanier allocated more than $5 million to the shipyard to increase its capabilities. Although no Navy commitment had been given either before or after the shipyard had been modernized

and expanded, Ingalls realized that the Navy would welcome almost anyone who could reduce costs and increase quality. In 1955, $500,000 was provided to Lanier to set up a submarine and nuclear training program. In 1956, Ingalls got its first submarine contract, and in 1957, received two nuclear submarine contracts. At the time, the Navy was adhering to a balance-of-forces concept to counter the Russian submarine threat and to transport men and materials across the surface of the seas to strategic points on the globe. In the late 1950's, many influential Navy men felt that the Russians were making a strategic mistake by concentrating their sea power in a submarine force. The rationale for this thinking was the belief that the Russians, without a strong surface fleet, would not be able to use the world's sea lanes to their advantage even if their submarine forces destroyed America's surface fleet. Resulting from this point of view, the United States Navy concentrated its resources on carriers, destroyers, missile ships, and nuclear submarines. By 1958, twenty-two nuclear submarines had been authorized and seven more had been requested for fiscal '59. Concurrently, Senator Jackson of Washington was pressing for the construction of at least a hundred nuclear subs. On the twentieth anniversary of Ingalls Shipbuilding Company, in the spring of 1958, the yard was enjoying its largest backlog ever with its design department ready to prepare all the drawings for five 11,000-ton freighters destined for the Lykes Brothers Steamship

Company. Its atomic commercial division was working on a containment vessel, and on its ways or tied to its fitting piers were: two destroyers, an atomic tanker, three submarines, an offshore mobile oil drilling barge, two tugboats, a cement carrier, and two ocean liners for Moore-McCormack. One of the ocean liners, the Argentina, was Ingalls' 189th ship.

Despite Ingalls' seemingly envious position, there remained two crucial problems that were to result in the sale of the yard in 1961. One problem was the lack of depth in the shipyards top management eschelons; the other was the family feud between Robert Ingalls Jr. and his parents. The thinness of top management was largely the result of old Bob's authoritarian style of management that led to tight estimating and cost control at the expense of longe range operational plans and market forecasting. Robert Sr. was concerned primarily with profits in the here and now, rather than potential for the future, and he was usually reluctant to expand for fear that he would lose control of what was essentially a one man operation. One method he used to cut costs was to maintain a heavy day-to-day operational workload for his executives. This not only reduced administrative costs, but also prevented his executives from being able to find the time to familiarize themselves with the operations of other Ingalls divisions, or to think about such vital questions as where to diversity, where to invest, where to expand, or what market forecasting should be undertaken. The result of

his leadership style and cost cutting obsession was a small-sphered, subservient management which became accustomed to working within the parameters allowed by the boss. When the old man died in 1951, these deficiencies became more obvious as the younger Ingalls off-spring was not the authoritarian manager the Ingalls management system required. In contradistinction, Robert Jr. was more interested in yachts, money, status, and power than he was in the daily chores required in the running of the company.

The young man's interests, of course, had been a source of irritation to his father while he (the father) was alive. He had restricted his son's interests and required him to perform the more routine chores in the business. Although old Bob gave money and stock to his son in dribbles, by 1948 the younger Ingalls, who had been president for seven years, owned 4,501 of Ingalls' 15,000 shares of stock and was enjoying an income of $45,000 a year. Of young Bob's four interests, only power had not come into his grasp because his father had no intention of grooming a successor, especially one that reminded him that he was "living on borrowed time,"[2] as his son had on occasion. As a result young Bob was intentionally denied the authority or experience that would have enabled him to competently hold down the No. 2 job in the company. In 1948, the conflict between father and son came to a head when young Bob decided to remarry after being divorced only a few months. The older Ingalls' objection to his son's second marriage was rooted

in the belief that two sets of children in one family wouldn't get along together. The second marriage took place, however, and Robert Sr. removed his son from the payroll and later attempted to divest him of his stock, on grounds that the company had the option to purchase the stock in the event of "retirement" or death. What followed was a series of lawsuits initiated by Robert Jr. to retain his stock and re-establish his position in the company. Young Bob's legal actions, of course, were met by counter-suits from his father, and the bitter litigation that ensued left a lasting impression on the personality of the younger Ingalls. Executives that Robert Ingalls Jr. had worked with testified, on the request of his mother and father, to his incompetence and irresponsibility. He was accused of threatening to kill his father and of actually beating him in the presence of his mother. Robert Sr. was so committed, in principle, against his son's position that when the Supreme Court finally ruled in favor of young Bob, the father suffered a stroke and died in 1951.

Young Ingalls became the chairman of the company and in 1952, the company bought back and retired the 2,287 shares of company stock that was in Robert Ingalls Sr.'s estate. Much of the underlying strength in Ingalls shipbuilding could be attributed to Robert Sr.'s vitality and the talents of two men: Lanier, vice chairman of the board, and William R. Guest, president of Ingalls Shipbuilding Corporation. But now the number one Ingalls had died and

these two talented men were approaching retirement age. Although the younger Ingalls was known to be controlling on occasion, he was generally content to let Lanier and Guest run the shipbuilding subsidiary. Ingalls continued along without an organizational plan, a sense of direction or a second level of management. In the spring of 1958, young Bob's mother filed a suit to regain the 2,287 shares of stock for her husband's estate. Following this, the shipbuilding subsidiary finished the contract on the two liners for Moore-McCormack with a $17 million loss which caused Ingalls Industries to post a $4 million loss in 1961. The reasons for the loss were a steel strike (which caused delays), a steel price increase (the contract was fixed-price), and a shake-up in management (Guest and Lanier left the company). These factors, plus inept management, material shortages, and mistakes resulted in a record loss on the two ships. Ingalls Jr. faced tremendous criticism for the loss, but the crucial blow came when the courts ruled in favor of his mother on the lawsuit to regain the aforementioned 2,287 shares of stock. The stock was returned to the late Ingalls Sr.'s estate where Mrs. Ingalls' lawyer, James A. Simpson, had the right to vote it because he was a co-trustee. This decreased young Bob's control in the company and eventually caused him to sell out his share of the business for $4 million.

But, the problems did not end. Many of the younger executives quit the corporation, convinced that the problems were insurmountable. As the situation deteriorated, the

Navy granted Ingalls Shipbuilding $9 million in credit, but by 1961 the shipbuilding subsidiary had been put up for sale. With a value estimated at $40 million to $60 million (including and accounting for $5 million worth of improvements from 1953 to 1955), the subsidiary was sold for $8 million. The buyer: Litton Industries.[3]

IV. GROWING UP WITH LITTON

At first Litton was not interested in Ingalls. The closer Litton looked at the shipyard, however, the more they came to realize that the nuclear submarines on the ways at Pascagoula were logical destinations for the products being produced by Litton's rapidly expanding electronics empire. Furthermore, Litton believed that the United States Government would be needing more of these submarines in the future to counter Russia's undersea threat. Litton also believed that, within 10 years, the United States Navy would be contracting out complete weapons systems to private contractors whereas in 1961 the shipyards were merely hull fabricators and parts assemblers. By purchasing Ingalls Shipyard below book value, Litton hoped to establish an advantageous position in order to take advantage of the increased Navy orders they felt were sure to come.

On September 8, 1961 the election of Roy Ash as Litton's president was announced by Tex Thornton. Previously Tex had been president and chairman of the board while Ash had been executive vice president. Thornton also announced to the board of directors that sales for the fiscal year ending July 31, 1961 had been approximately $245,000,000 or about a 30 percent increase from $187,761,242 in the preceding year. Share earnings, after preferred stock dividends,

were estimated at $2.30 for the year, up 33 percent from $1.72 a year earlier.[1]

In 1962, the legal preparation of Emmett Steele's 1959 lawsuit was taking place. Harold Rhoden, Steele's attorney, took a deposition from Noah Dietrich in preparation for the trial. In the deposition Dietrich related the events surrounding the accounting irregularities at Hughes Aircraft and the part that Tex Thornton had played. Thornton claimed that Dietrich had been "maliciously defamatory" and filed a $40 million slander suit against the Hughes' executive. In addition, Litton sent a letter to 12,000 employees in which they accused Dietrich of "irresponsible and malicious attacks." The letter also claimed as "completely false" Dietrich's charges that the Air Force had been over charged as a result of improper accounting practices at Hughes Aircraft.[2] In response, Noah Dietrich filed a libel suit against Thornton and Litton, in which he asked for 40 cents in actual and $1 million in punitive damages.

By May, 1963, after nearly a decade of operation, Litton's sales had risen from about $9 million for its first year of business to an estimated $540 million for the fiscal year ending July 31, 1963. Her assets had grown from $7,600,000 to $333 million during the same period. Litton was more than just an electronics company. Her business ranged from producing military command and control systems to manufacturing and assembling business machines and electronic

computers. She was deeply committed in dozens of fields and heavily invested in shipbuilding through which she hoped to find new outlets for her electronic components. $1,000 invested in her stock in 1953 would have been worth $85,000 by May, 1963 (had Charles Litton taken his $1 million in Litton stock it would have been worth $85 million). Litton had also used her stock to acquire some 37 companies. Earning per share had gone from 9 cents in 1955 to $2.16 by May, 1963, and her return on net worth was holding at an impressive 16 percent. Litton had never paid any cash dividends, but her investors were sticking with her with the belief that she would continue to grow. She had paid four stock dividends and her common stock, selling around $65 per share, had split twice. Wall Street, however, had its skeptics. They felt that the stock was overpriced at a 30 to 1 price earnings ratio and that Litton would not be able to sustain her sales growth at 30 to 50 percent a year. If her growth slows many felt her stock would drop rapidly in price. In addition, her stock had been heavily short traded on occasion. Her after tax profit on sales was approximately 4.1 percent which was considered fair in electronics but not spectacular. Others were looking for organizational problems due to her rapid growth and wide diversification.

Litton's net cash flow was approximately $34 million for fiscal year 1963 and her long term debt was relatively light which meant that she could buy more companies if she

wanted to. Although acquisitions played a major role in Litton's growth, they were not the sole reason for her expansion. Once a company had been acquired, Litton would develop that company's existing market. She would also create new markets for her own products. Some of her internal growth was beginning to pay off in that her inertial guidance and military command and control systems were entering the more profitable stages of large-scale production where fixed-price contracts were substituted for cost-plus-fixed-fee contracts. About 55 percent of Litton's sales were to military consumers although she had no major commitment to any one military project. At the same time, Litton was looking to the commercial market as a future outlet for her business machines and microwave cooking ovens as well as other products. By 1963, Litton's 36 divisions had about 43,000 employees located in 71 plants in the United States and nine foreign countries.

Roy Ash handled theinternal day to day operations of the company while Thornton concerned himself with the external environment. No division reported directly to Ash although key men were permitted to enter either Ash's or Thornton's office at any time. The organization remained decentralized for day to day operations, but centralized for major investment decisions. Litton's headquarters were staffed by approximately 90 people, quite small by comparative standards. There were many entrepreneurial types on the overworked staff and no standing committees. At the time that Thornton turned over his presidential

responsibilities to Ash he set up five groups of divisions. By May, 1963, the five groups with their respective sales and percent of total sales were:

	Group	Sales	Percent of Total
1.	Business-Machine	$157 million	29%
2.	Shipbuilding	$ 85 million	16%
3.	Electronic Components	$ 49 million	9%
4.	Commercial Electronic Equipment & Services	$ 49 million	9%
5.	Electronic Systems	$200 million	37%

Although the mix of sales was shifted in favor of the military, Thornton saw the trend as being temporary because the greatest long term potential remained in the commercial sector. Much of the credit for Litton's success could be attributed to her sense of timing. When other companies were contracting for whole military systems, Litton was concentrating on electronic components. In inertial guidance, Litton went for manned military planes instead of the glamorous missile market. The planes turned out to be more lucrative than predicted by most companies. In the computer field, Litton developed small, inexpensive ones instead of the large, general purpose units. Moreover, when the competition was looking toward space, Litton looked to the sea and purchased Ingalls shipbuilding to obtain a foothold in the nuclear submarine market.

Litton's timing was due to Thornton's brilliant, intuitive mind. Thornton was different things to different people. To some he was an ambitious entrepreneur; to others he was a promoter. He was described as a great dreamer; others pictured him as a dreadful worrier. He was shy in public for fear of looking awkward, but in business negotiations his nerves were like steel. He was articulate and inarticulate and had varying moods. Roy Ash, on the other hand, possessed a cool, logical, financial mind. Together, Thornton and Ash were a formidable pair.

Litton's successful commercial endeavors, however, were tempered somewhat by the courts. Emmett Steele's case was brought to trial in October, 1964, and six months later, the jury awarded Steele $7.5 million ($5,182,885 in damages with 7 percent interest from December 5, 1958 until April 19, 1965). The damages were awarded against Litton Industries, Inc., Charles B. Thornton, Roy L. Ash, Hugh W. Jamieson (then the chairman of Jamieson Industries in Los Angeles), and the Electro Dynamics Stock Trust Fund (a partnership of Messrs. Thornton, Ash, and Jamieson). The jury awarded the damages on two counts: Breach of contract, and fraud and deceit. There was no verdict on a third count of conspiracy. Immediately after the jury delivered its verdict to the court, the judge, Frederick W. Mahl, issued an 11-page memorandum disputing the jury's decision. He ordered a stay of proceedings for an indefinite time period and refused to enter the jury's judgement.

Steele had charged that Thornton had broken a promise to give him a one-fifth share of original Litton stock. He claimed that Thornton was to have received a two-fifths share while Ash, Jamieson, and himself were to have received a one-fifth share apiece. With stock splits and dividends, Steele's share would have totaled 278,000 shares on April 29, 1965, and would have been worth $24.5 million. Judge Mahl, however, ruled against Steele in an accompanying equity suit to gain possession of his one-fifth share of stock. During the trial, Charles Litton, when called as a witness, claimed that he sold his company to four men. To dispute Steele's claim that he was one of the founders Litton's attorneys attempted to belittle his importance in the company by contrasting his privileges to those of Thornton. They said that Steele did not possess a company car whereas Tex did. They also pointed out that Thornton's office was larger and better equipped than Steele's, and that it had private convenience facilities. "Translation: Tex Thornton had an executive washroom."[3]

Three months later, in July, a state superior court in Los Angeles, California, formally entered the jury's verdict into the record. Steele's total award came to $7.6 million when interest ($116,365) for the 81 days since the April verdict was added in. Mr. Steele's lawyer had filed a dismissal of the equity suit for the Litton shares which took the issue out of Judge Mahl's jurisdiction. Litton's motion to vacate the dismissal was denied by

Judge Mahl, the district court of appeals, and the state supreme court.

By July, 1965, Litton was approaching an annual sales figure of $900 million. In a little more than eleven years, she had acquired 40 additional companies. She had three basic rules for merger situations:[4]

1. The company being acquired had to fit with Litton's product and market planning.
2. The company had to have strong management. If it didn't, Litton had to have remedies.
3. If the first two conditions were met then Litton would analyze the financial aspects, price, potential return on investment, etc.

Litton was able to sidestep Washington's attempt to enforce anti-trust legislation by claiming that she was a challenger rather than a dominating force in the fields that she had entered.

By May, 1966, Litton's sales had increased by more than 30,000 percent since 1954 to $915.6 million annually. Her profits were running at almost $40 million a year or $1.68 per share. She was the twenty-sixth largest industrial employer in the United States with a daily payroll of approximately $2 million. She had undergone three two-for-one stock splits and had paid two and a half percent stock dividends for eight years. She produced 6,000 products and employed 70,000 personnel in 146 plants and laboratories located in 12 states and 21 foreign countries. One-third of Litton's sales were in business equipment, another third was in industrial and professional products, and the last

third was in defense and space. Thornton was predicting that the $2 billion sales figure would be reached within four to six years. Furthermore, Litton was able to generate a yearly cash flow of around $80 million.

Litton's leadership was aware of the rapid changes taking place--technological as well as political, social, and economic. Ash and Thornton observed that the U. S. had made more scientific and technological progress during the last twenty years than in the sum total of recorded history, and that the rate of progress would double during the next ten years. Furthermore, Litton believed that change created opportunities. To handle the changing environment, Litton emphasized a decentralized organization along with giving her personnel authority commensurate with responsibility at the division level. Joseph S. Imirie, who was the Assistant Secretary of the Air Force before he came to Litton in late 1963, headed the industrial and professional group, which accounted for 15 percent of sales. Imirie once stated, "At the local level, we have everything meaningful to run the business. There's simply no 'lese-majeste' or privilege of office at Litton, and we don't troupe down the hall to Ash's office weekly or monthly." Another Litton executive, Gordon Murphy (headed Litton's Data Systems division), said, "The key to Litton is that small units are run like separate companies. The program manager controls all the dough, and nobody gets paid in proportion to the number of people working for him."[5]

Litton's financial strength, decentralized organization, and talented leadership were not the only reasons for her success. Thornton's political contacts in Washington couldn't have hurt his company's business. When Thornton visited the capital city, he frequently ate breakfast with the Secretary of Defense, Robert McNamara, who at one time worked for him. In addition, Thornton hired two of McNamara's men in the fall of 1963. John H. Rubel, Assistant Secretary of Defense, was hired as a Litton vice-president in September. A month later, Joseph S. Imirie was on Litton's payroll. Critics have suggested that Litton's access to the Pentagon has been a key to her good fortunate in the business world.

Despite Litton's business acumen, however, the courts consistently were there to take the edge off of her commercial ecstasy. Thornton's slander suit against Noah Dietrich had been rejected, first, by the Superior Court of Los Angeles and, in September, 1966, by the Court of Appeals.

V. LITTON CROSSES THE RIVER

In January, 1966, an article entitled "Can we Modernize U. S. Shipbuilding?" appeared in the United States Naval Institute Proceedings. Lieutenant Commander Charles J. DiBona, the author, pointed out the inefficiencies inherent in the United States shipbuilding industry and in the manner in which the U. S. Navy procured its warships. When Robert S. McNamara became Secretary of Defense, one of the changes he made was to allocate funds to specific military missions rather than to each service separately as had been the tradition before he took office. DiBona felt that in order for the U. S. Navy to compete effectively with the other services for these funds it was going to have to devise more efficient method to procure its ships. This would not be a trivial task, because the American shipbuilding industry (by law, the U. S. Navy's sole source for ship procurement) was the world's most inefficient.

During World War II, America built thousands of ships to transport and protect the massive amounts of men and material needed to prosecute the war. When hostilities ended, however, the resulting glut of ships caused the United States' shipbuilding industry to shrink drastically in output. This decline in shipbuilding was so severe that by 1966 the industry still had not recovered. This boom-bust phenomenon also occured during and after World War I.

In fact, the only periods in history when the American steel shipbuilding industry had grown and prospered had been during the two world wars. Even then ships for the navy and the merchant marine were paid for by the government. As late as January, 1966, American shipbuilders were limited almost entirely to producing commercial ships, for which the government subsidized half the cost, and naval ships, for which the government paid all, because foreign shipbuilding companies were able to produce better ships cheaper and more efficiently. By then foreign nations, mostly Japan, were producing the vast majority of the world's ships. In 1966 Japan produced 9,737,000 dwt;[1] W. Germany produced 1,658,000 dwt;[2] Sweden, 1,805,000 dwt;[3] and the United States, 198,466 dwt.[4] From 1967 to 1971 Japan produced 50.2 percent of the world's deadweight tonnage; Sweden produced 8.18 percent; W. Germany produced 6.93 percent; and the United States produced 1.55 percent.[5]

It would be instructive to reflect, for a moment, upon the economics of shipbuilding. Shipbuilding, not surprisingly, is very closely related to the shipping industry; the shipping industry, in turn, is dependent upon world economic growth. This dependency comes about for two basic reasons. First, as the world's industrialized nation's mature, they become increasingly more dependent upon resources imported from other countries. These resources, of course, are transported across the world's oceans by ship. Second, as the developing countries grow, they become dependent

upon world trade to sustain their expanding economies.. This world trade is also carried out on ships. The demand for shipping, therefore, is a function of the demand for things to be shipped. The demands put upon the shipping industry, however, are cyclical due to economic, political and military considerations. Examples of political and military pressures working to increase the demand for ships were World War I, World War II, and the Suez Canal crisis in 1956. The introduction of airline passenger travel across the oceans is a good example of an economic force decreasing the need for shipping. Prior to passenger airliners, people travelled across the seas on ships. Another example of a decrease in the demand for shipping occurred in 1933, in the middle of the worldwide depression, when world trade was reduced to the bare minimum.[6] Despite the cyclical nature of shipping, however, the industry had expanded dramatically from 1950 to 1970.

Shipbuilding, naturally, responds to the needs of the shipping industry. Shipbuilding, therefore, is cyclical. In fact, the cyclical movements of the shipbuilding industry are of a longer duration than the movements of most durable goods industries. The cyclical nature of shipbuilding presents some interesting problems. The biggest problem among shipbuilders is the difficulty encountered in maintaining a large, stable backlog of shipbuilding orders (orderbook). Without a stable orderbook, it is difficult (if not impossible) for shipyards to maintain a stable workforce, especially in the skilled areas. During slack

building periods it has been common for shipyards to lay-off fifty to seventy percent of their workforce. When the shipbuilding lull ends, the shipyards find it most difficult to rehire the most productive skilled workers, because they have usually found other work. Many of the workers go into the construction industry where the pay is better. The result, then, has been a sharp chronic fluctuation in the employment levels of most classes of skilled workers.

The absence of a stable orderbook, moreover, has been responsible for additional shortcomings. Without a stable workload, setting up facilities for series production is both impractical and uneconomical. Furthermore, if the shipbuilder had a large orderbook, he could schedule his material delivery over shorter periods of time which would result in inventory savings, because he would be carrying less material in inventory at any one time.

Another problem associated with the cyclical nature of shipbuilding is that ship construction is a long process, and the time from contract signing to ship delivery can span the cycles of world shipping demand. This increases the risk to both the buyer and the builder.

By the late 1960's most American shipyards had been acquired by conglomerate corporations. These corporations, Litton in particular, had sensed that opportunities were waiting for them in shipbuilding. With the old steel companies ready to sell out, the aerospace industry moved in. Furthermore, it was easier for a conglomerate to raise the money needed for shipyard capital investment.

Nevertheless, the shipyard still had to compete with the other conglomerate divisions for investment dollars. One drawback to the conglomerate control of shipyards was that the financial control of the operation was vested in directors who had little knowledge of shipbuilding.

In foreign shipbuilding nations the government plays a crucial role in shipbuilding operations. Foreign governments attempt to stabilize the shipbuilding orderbook by directing large backorder logs to their respective shipyards. In Japan, for example, shipbuilding is a national policy, because that country is dependent upon shipping to acquire needed imports.

In the United States, however, there was no coherent government policy on shipbuilding. Until 1970, United States shipyards were dependent upon Naval ship construction for survival. The lack of a stable, long-range shipbuilding budget for the Navy (due to Congressional considerations and the ship surplus resulting from World War II) made matters even worse. The result was an inefficient American shipbuilding industry when compared to other nations.

In contrast, the United States' aircraft industry was the world's most efficient and was the leading supplier of aircraft to the world market. Furthermore, the industry did not need or receive direct subsidies to enable it to compete against foreign aircraft industries whose wage rates were lower. When other nations needed airplanes, they came to the United States. When they needed ships,

they stayed away. DiBona, therefore, suggested that the production and procurement of ships should be patterned after that for aircraft. Specifically, he recommended the standardization of designs, the production of ships in large blocks (25 to 35), and the awarding to one firm the contract for all ships of one design.[7] If shipbuilders knew beforehand that they would be receiving the total award instead of just a small port, they would be motivated to modernize their production facilities so they could reduce costs on a mass production basis. In addition, DiBona suggested that the Navy should alter its procurement procedure so that the shipbuilder would be bidding on the design phase as well as the ship's production. Until this point, the Navy designed its own ships, using naval architects, and then presented the design to shipbuilders for their bids. DiBona was suggesting that the Navy define the task the ship was to accomplish and then present this to the shipbuilding firms. They, in turn, would design the ship and present the design (and the cost) to the Navy. The Navy would then choose the best design/price combination and award the contract to that company. DiBona, of course, was hinting that the United States shipbuilders should pattern their yards after the automated shipyards in Japan, Germany, and Sweden. These countries produced ships in a modular fashion instead of traditionally laying the keel and building upwards. By using modular construction, they were able to build ships in an assembly-line manner which

resulted in better ships for less money. By building ships in the modular mode, American shipbuilders would be able to take advantage of assembly-line economies to reduce costs. In addition, there was a significant body of evidence to suggest that a learning curve existed for shipbuilding. This learning curve could be attributed to organizational and individual learning at the specific yard plus cost savings due to the procurement of manufactured components en masse from subcontractors, because the producers of these components also learned from series production.[8] Essentially, DiBona was advocating a multiyear total package procurement concept for naval ship acquisition. This concept, of course, was not new, for the defense department, under McNamara, had been using this concept to procure aircraft for a number of years.

Interestingly enough, DiBona was not the only individual thinking along these lines. In fact, during the mid-60's, a team of design experts from Litton Industries had toured the world's shipyards to get first hand information on the modular ship construction in progress at the shipyards in Germany, Sweden, and Japan. Their findings precipitated the expansion of Ingalls shipyard to include the West bank of the Pascagoula river. Before the new yard could be built, however, the company had to obtain $100 million for the purchase of the land on the West bank and for the construction of the yard itself. The federal government was unwilling to finance the expansion, so Litton went

to the capital of Mississippi and threatened to move their whole shipbuilding operation out of the state if they didn't receive the required backing. Governor Johnson called an emergency legislative session together to pass a $130 million bond issue for the new yard. In October, 1967, the bond issue was presented to the Mississippi voters. It was overwhelmingly approved. The state of Mississippi floated the $130 million (including $30 million for interest) bond issue to finance the construction of the new yard. The yard was then leased to Litton for a thirty year period after which the yard would be owned free and clear by Litton Industries. Furthermore, Litton would not have to start paying the $9 million a year lease payments until 1972. The company could then invest $125 million ($130 million minus $5 for underwriting costs) and use the income to build a financial buffer from which it could draw funds to pay the lease when the payments became due. In return, the state of Mississippi was expected to get an additional 12,000 job openings at the new yard. The profits, however, were to go to Litton. Groundbreaking ceremonies for the 611-acre West bank shipyard took place on January 11, 1968.

Strangely enough, Litton had no firm commitments from the Navy for new ship construction at the time the lease-purchase agreement was signed with the state of Mississippi. However, she did have reason to believe that navy contracts were forthcoming. The procedure for bidding on ship design

and production contracts described by DiBona was actually adopted by the Navy after 1963. The procedure, known as CF-CD (Contract Formulation: Contract Definition), was worked out for the Department of Defense by John H. Rubel while he was assistant secretary of Defense under McNamara. Rubel, of course, had been working for Litton since the fall of 1963.

In November, 1965, McNamara announced executive branch approval of the Navy's Fast Deployment Logistics (FDL) ship program. As a major part of the program to reduce the costs of stationing U. S. troops overseas, the ships (about thirty of them) were to be strategically located throughout the world where they could be used to supply American troops (flown in by the Air Forces' C-5A aircraft) at a moments notice to help suppress fire-fights on any part of the globe. This ship program was the first to be handled under the Navy's new weapons systems acquisition approach patterned after Rubel's CF-CD. Although several shipbuilding companies entered the competition, only three (Litton, Lockheed, General Dynamics) made it to the final stage. Interestingly enough, all three had been new entrants into shipbuilding. Each got $5 million from the government to finish both the FDL design plans and a new shipyard (it was recognized that whoever won the award was going to have to build a new automated shipyard). Litton eventually won the contract because climate ruled out New England and highly unionized labor eliminated the West Coast. Besides,

the United States' domestic colony of cheap labor was located in the South; more specifically, Pascagoula (the fact that Rubel was working for Litton didn't reduce her chances of winning the award).

Despite Litton's success at winning the $2 billion prize, Congress refused twice (both in 1967 and 1968) to appropriate the needed money. The legislature did not want to project the impression the United States was assuming the role of the "world's policeman" by funding the FDL program. Litton was not worried, however, because there would be other shipbuilding contracts, besides, the conglomerate had less than $3 million of her own money tied up in both the new yard and the FDL program.

Once again, however, Litton's seemingly advantageous position was tempered. In January, 1968, a letter was sent to Litton stockholders advising them that the company's net earnings would show a sharp decline for the 2nd quarter of fiscal year 1968. After 57 consecutive quarters of earnings increases Litton suffered her 1st earnings decline ever. Earnings fell to $7,205,000 for the 2nd quarter of fiscal year 1968 with earnings per share of 21 cents. This was a 30 percent drop from year earlier earnings of $16,437,000 or 63 cents a share. Wall Street's reaction was savage and quick. In one week Litton's stock dropped some 18 points. By March the stock was selling at half its 1967-1968 high of $120.375. What was unsettling to investors was the surprise to management of the earnings drop. Up until the

time of the announcement, management was apparently unaware of the deteriorating situation. Skeptics thought that the conglomerate was too large and diversified to control effectively, and that a need existed for the development of a more rigorous cost control system that would better inform top management of an unhealthy situation. The conditions were right to precipitate a loss of faith in Litton's decentralized style of management. Litton did not like being called a conglomerate because a conglomerate's products were generally unrelated thereby making the management of their production and distribution more difficult due to the different expertises required. Litton wanted, instead, to be called a diversified company, because the products of such a company had a common band and therefore were easier to manage. Litton claimed that all her products were related because they all had an electronic foundation. Critics, however, couldn't draw the connection between nuclear submarines and micro-wave ovens.

Although Litton claimed that the decline was due to "certain earlier deficiences of management personnel," the actual causes were more complex. First, the company had been forced to write off $8 million in excess costs on commercial shipbuilding contracts that had been signed in 1964 and 1965. In her previous Navy work, Litton had become accustomed to the cost plus shipbuilding contracts where the tab for excess costs had been picked up by the government. According to the estimates of a former Litton

executive, it had been Litton's normal practice to renegotiate contracts to one and half times their original value during the course of development and production. In the civilian environment, however, contract administrators were not so generous. Litton's underestimation of costs on her civilian shipbuilding contracts was more likely to result in her having to make up the difference out of her own pocket. Working for the government had other advantages also. Little or no capital was required on the part of the contractor and errors were not capitalized upon by civilian competitors.

Second, Litton had been undergoing a period of top management personnel attrition. Litton, as in most organizations, had room for only a few men at the top of her management pyramid. Unfortunately, Thornton and Ash were relatively young which meant that no one was going to move into their positions as president or chairman in the near future. This was particularly discouraging to the men who ran Litton's divisions and subsidiaries, because in most cases, these men were already running independent companies when they were acquired by Litton. Litton's policy, it can be recalled, was to retain these men in their respective positions as the presidents of the newly acquired subsidiaries. At first the arrangement was satisfactory to all concerned, but because these individuals had entrepreneurial dirves, they became dissatisfied with their chances of moving up within Litton's organizational structure. Many left in

the mid-60's to take responsible positions in such companies as Walter Kidde & Co. Inc., Hunt Foods & Industries, Inc., and Teledyne, Inc. to mention just a few. The men who left referred to themselves as "Lidos" (short for Litton Industries Dropouts) and took with them the management philosophy learned at Litton. In short, Litton became a business school where top executives could obtain experience plus practical schooling they could take to other companies in their rise up the corporate pyramid. In each such case, however, another company's gain was Litton's loss.

The third reason for Litton's drop in earnings was the trouble that occurred in her business-equipment group. Labor strikes in this group caused the loss of 30,000 man-weeks for the 2nd quarter of fiscal year 1968. In addition, the delay in getting her new Royal electric typewriter to market, the failure of her office furniture and Monroe electronic calculator sales to meet planned growth rates, and the heavier than expected losses in the introduction of her new office-copying machine, the Royfax, had an effect on the group's 2nd quarter performance.

At this point it would be interesting to ponder, for a moment, about the basis of Litton's financial strength up to early 1968. The traditional concept of business growth leaves the onlooker with the image of a company creating and selling products at a resonable profit, then turning around and putting the excess earnings back into

new plant and equipment to produce more products to finance additional growth internally. Litton, however, was not a traditional firm. Only a fraction of her growth thru 1968 could be attributed to the traditional method of internal building. Buying, not building, was Litton's formula for growth. Furthermore, her stock was the "money" used to purchase additional firms. Therefore, it was in Litton's best interest to take measures that would maintain or increase the value of her stock. The value of a company's stock, however, is not calculated by adding up the value of a company's tangible assets, rather, it is determined by what others will be willing to pay for it; and what others are willing to pay will depend upon their expectations of the stock's future value. If they expect the value to rise in the future, they will be willing to pay a higher price in the present. The expectations, of course, are grounded in the potential for real corporate growth in both assets and earnings.

Expectations, however, are largely intuitive, and intuition can be influenced by intangible factors. As Jack Dreyfus, head of one of the biggest mutual funds on Wall Street, once said:

> Take a nice little company that's been making shoelaces for 40 years and sells at a respectable six-times-earnings ratio. Change the name from Shoelaces Inc. to Electronic's and Silicon Furth-Burners. In today's market, the words 'electronics' and 'silicon' are worth 15 times earnings. However, the real play comes from the word 'furth-burners,' which no one understands. A word that no one understands entitles you to double your entire score. Therefore,

> we have six times earnings for the shoelace business and 15 times earnings for electronics and silicon, or a total of 21 times earnings. Multiply this by two for furth-burners and we now have a score of 42 times earnings for the new company.[9]

Image, then, is crucial to the value of a firm's stock; more specifically, 'growth image.' Because Litton and other conglomerates used their stock as 'money' to purchase other companies, it was important, then, to maintain this 'growth image' in order to keep the price of their stock high so that they could buy more assets in exchange for a reduced amount of their shares. By creating a 'growth image' a firm could drive up the price of its stock which gave it additional money to purchase real assets in the form of another company. Expected value then became real value which supported the corporations image of continued growth. This, in turn, increased the value of the corporations stock, and the cycle was ready to repeat itself.

Fortunately, for conglomerates like Litton Industries, there were legal ways for them to enhance their growth image. Traditionally the annual report to stockholders had been a reasonably dry-reading document. In 1967, however, Litton incorporated the most up to date advertising and marketing techniques to turn her annual report into a vehicle that projected the growth image. Furthermore, she used the latest creative accounting methods to enhance her financial appearance. At the higher levels, accounting is by no means precise, but the vagueness of the principles that determine what direction a corporate

audit will ultimately take has contributed significantly to a conglomerate's ability to improve its image.[10]

Litton's 2nd quarter drop in earnings was not the only setback suffered by her chairman. In early 1968 Noah Dietrich's libel suit against Thornton came to trial in Superior Court. After two months of court deliberations, the jury awarded Dietrich punitive damages of $5 million against Thornton and $1 million against Litton. Judge Bayard Rhone, however, set the verdict aside. Dietrich's lawyer appealed with a 531 page brief accusing the judge of "unabashed bias and patent prejudice"[11] against his client. The judge granted a motion for a new trial.

VI. GROWING UP WITH CONGRESS

The first ships scheduled to be built at Litton's new yard were eight commercial container vessels for Farrell Lines and American President Lines. Then, on May 1, 1969, Litton was awarded a contract to build nine Marine Corps amphibious assault ships (LHA's) for the Navy. Four days later Senator Barry Goldwater of Arizona criticized the so-called "civilian-industrial complex." He pointed out that both Thomas D. Morris, Assistant Secretary of Defense for procurement, and Alain C. Enthoven, another Assistant Secretary of Defense, had left their government positions in January, 1969, to work at Litton Industries. Both men held vice presidential positions with Enthoven, the individual who systematized the Pentagon's decision making process, being the vice president for economic planning. What had been particularly distasteful to the Senator was the fact that Litton's defense contracts had increased more than 250 percent from 1967 to 1968. In 1967, Litton, with awards exceeding $180 million, ranked 36th among defense contractors. At the end of 1968 Litton was 14th with contracts approaching $466 million. This increase occurred during Morris' final year as the supervisor of the Defense Department's $45 billion procurement program.

Senator William Proxmire, who previously had been critical of the defense industry's practice of hiring high

ranking military officers, accused Litton of "buying influence with the Pentagon and plenty of it." He referred to Litton's hiring of Morris as "a payoff for the huge Pentagon business shifted to Litton in 1968 and as assurance of immense future influence for Litton."[1] Furthermore, he noted that as of February, 1969, the top 100 defense contractors employed 2,072 retired military officers of the rank of colonel or Navy captain and above; an average of twenty per company. Litton (with sales of $1.86 billion), however, had forty-nine or two and a half times the average. Nevertheless, this was not the highest. The aerospace firms employed the greatest number of retired high ranking military officers. Lockheed Aircraft Corporation (with sales of $2.2 billion) had 210; Boeing Corporation (with sales of $3.27 billion) had 169; McDonnell Douglas Corporation (with sales of $3.61 billion) had 141; General Dynamics Corporation (with sales of $2.66 billion) had 113; North American Rockwell Corporation (with sales of $2.64 billion) had 104. Proxmire felt that the defense industry's practice of hiring high ranking Pentagon officials and military officers was potentially dangerous to the public interest. He pointed out that almost 90 percent of all government contracts were negotiated rather than bid on competitively.

> "In some cases," he said, "former officers may even negotiate contracts with their former fellow officers... In addition, there is subtle or unconscious temptation to the officer still on active duty. After all, he can see that over 2,000 of his fellow officers work for the big companies. How hard a bargain

does he drive with them when he is one or two years away from retirment?"[2]

Finally, Proxmire stated that, "whether Litton or some other firm gets a particular contract will be determined very largely by the subjective attitude of Pentagon officials toward Litton officials."[3]

On June 23, 1970, Litton won the contract to build thirty DD-963 destroyers for the United States Navy. It was the largest single peacetime award for shipbuilding in the history of the Navy. The ship had been scheduled, like the LHA's, to be built at Ingalls Shipyard's new facility on the west bank. The destroyers were 560 feet long, had a 54 foot beam, and had a displacement of 7000 tons. They were about the size of the Navy's World War II cruisers. With government furnished radar and weaponry, the total program cost approached $2.55 billion or approximately $85 million per ship. The contract price to Litton, without government furnished equipment, was $2.1 billion. Due to the sums of money involved, Congress debated the wisdom of awarding the total 30 ship contract to one yard. On June 29, 1970, Margaret Chase Smith, the ranking Republican member of the Senate Armed Services Committee, severely criticized the Navy's decision.

She related to the Senate the earlier correspondence she had had with the United States President, the Secretary of Defense, and the Secretary of the Navy. In her letters dated April 24, 1970, to these individuals she had raised

six points. First, she questioned the last minute contract pricing reset provision that enabled Litton to underbid Bath Ironworks of Maine, her homestate, by $270 million or $9 million per ship. On April 3, 1969, the Navy received three proposals from Litton, Bath, and General Dynamics to build the DD-963 destroyer. In September, 1969, the Navy announced that it had dropped General Dynamics from the competition leaving Litton and Bath. The Navy then issued two "Requests for Proposal Supplement," one in September, 1969, and the other in January, 1970. The purpose of these proposal supplements was to place the ship designs of the two remaining companies on a relatively comparable basis and to bring the prices of each down from their April, 1969, estimates. By February, 1970, the two companies had resubmitted their third proposal to the Navy. Each, according to Senator Smith, had met the Navy's technical requirements, and each had approximately the same price. Then, on March 20, 1970, the Navy asked each firm to submit a fourth prposal; their "best and final" offer. No technical or specification changes were requested, instead, the Navy asked that the new proposals be on the basis of a new type of contract. The change was to be from a "Fixed Price Incentive" contract to a "Fixed Price Incentive Successive Targets" contract (FPIS). The difference was that a firm fixed price or a new target price could be specified in the thirty-ninth month after the contract award date. Furthermore, the share line had been changed from a 70/30 ratio

to a 85/15 ratio, and the ceiling price had been raised to 130 percent of target cost from 125 percent of target cost [See Appendix C]. The ultimate result of these changes was that Litton underbid Bath by a substantial $270 million on the fourth proposal.

Second, she questioned the rationale of awarding a $2 billion contract to a company that already had the largest shipbuilding backlog in the industry (Litton had the LHA plus submarine and merchant ship contracts). She also noted that Litton's new yard was inexperienced at handling a large and diversified backlog of ships.

Third, she questioned the wisdom of placing such a large award with one contractor from the viewpoint of national security. If the company failed to produce, the impact upon the Navy throughout the 1970's would be immense.

Fourth, the contract, based upon McNamara's multi-year total-package-procurement concept, would take control away from Congress because of the provision for large cancellation fees should all or part of the program be terminated.

Fifth, the award of this contract to a yard that already had modernized because of prior total package awards would jeopardize the existance of an already weakened competitive base for future destroyer construction. The ultimate result could be more expensive destroyers in the long run.

Sixth, the leaks of vital bidding information prior to contract award had violated public law and had underminded

the competitive process through which the DD-963 had undergone. Senator Smith related how personnel of shipping lines, for whom Litton has built, or was building merchant ships, told a member of congress on a golf course two months prior to the DD-963 contract award, that Litton had underbid Bath by $270 million.

On August 18, 1970, Senator Smith again addressed the Senate. She reiterated the points in her June 29th speech and presented the President's Blue Ribbon Defense Panel Report of July 1, 1970 in support of her position. She claimed that the report, prepared under the cognizance of the Comptroller of Defense, Wilfred J. McNeil, added strength to her argument. The report, among other things, presented five areas of concern.

First, if the Navy implements its concepts of series production in a single yard for major ship procurement programs, the long term result would be the concentration of major Navy shipbuilding programs in three yards; Newport News, Litton, and Electric Boat. Not only would the remaining shipyards lose their capability to produce because of a lack of utilization, but the existence of the big three could also be jeopardized because of the risks inherent in large package ship procurement programs. For example, the thirty ship DD-963 program represents about $3 billion; a ten percent loss, or $300 million, exceeds the net worth of both companies competing for the award by at least a factor or two.

Second, as concentration of shipbuilding continues, the competitive base will decline, thereby offsetting the economic advantages gained through series production.

Third, in order to maintain an adequate production base for its warships, and in order to generate competition within this base, the Navy should divide its large multi-ship awards among two or more yards.

Fourth, to provide healthy competition and to maintain an adequate production base, the Navy should distribute its prime series production contracts of one class of ship to more than one yard if the quantity is greater than ten ships.

Fifth, by now the Navy could have had a DD-963 prototype ready to sail for less money than they have already put out for paper.

On August 20, 1970, Senator Smith made still another presentation to the Senate. This time, however, she used the term "buy-in" to describe the reason for Litton's drastic reduction in price on the fourth proposal. Furthermore, Mrs. Smith challenged the credibility of Rear Admiral Nathan Sonenshein, commander of the Naval Ship Systems Command. On May 18, 1970, the admiral sent a confidential memorandum to the chairman of the Senate Armed Services Committee. In it he said that it would cost the Navy an extra $225 million to split the DD-963 award among two yards. However, the same admiral told the news media a few weeks later that the extra cost to the Navy would be

$600 million if the award were split. Both figures were reported on page 30 of the July 4, 1970 issue of Business Week in its Washington Outlook section. The magazine referred to the $600 million as a "scare figure," while Senator Smith questioned the credibility of the confidential classification on the memorandum containing the $225 million estimate if that same figure had been supplied to Business Week with no classification restrictions. Business Week further interpreted the publicly announced $600 million figure as being the Navy's attempt to frighten the Congress out of splitting the award legislatively.

On August 26, 1976, Senator Smith explained in detail the sixth point in her April 24th letter concerning leaks of information prior to the DD-963 contract award. She said that she wrote a letter to the Attorney General on July 1, 1970. In the letter she mentioned that James L. Goodrich, the president of Bath Iron Works, was her source of information, and that Representative William D. Hathaway, the Congressman from the Second Congressional District of Maine, was the individual who was told at the Congressional Golf and Country Club by personnel of shipping lines, for whom Litton had built, or was building merchant ships, that Litton had underbid Bath by $9 million per ship or $270 million total. The response to her July 1st letter took 41 days and was inconclusive. Mrs. Smith told the Senate that she had been "brushed-off," and that the Criminal

Division of the Department of Justice had failed to contact either James L. Goodrich or Representative Hathaway concerning the alleged disclosures. She went on, saying that Bath officials reported to the Secretary of the Navy that they believed their February 2, 1970 proposal price had been known in the industry prior to March 26, 1970 or three months before the contract award. The significance, according to Mrs. Smith, was that Litton knew ahead of time what Bath's bid had been and therefore was able to underbid by a substantial amount on the final round knowing that she would be able to recoup the cost at the thirty-ninth month because of the new reset provision.

On August 27, 1970, Mrs. Smith had a Government Accounting Office report printed in the Congressional Record. The report had been the result of Mrs. Smith's July 1, 1970 letter to the GAO requesting that they conduct an investigation into the circumstances surrounding the $2.1 billion DD-963 award to Litton Industries, Inc. The GAO reported that the destroyer contract was a multi-year fixed-price incentive, successive target (FPIS) contract. The initial target price had been $1.7892 billion, which consisted of an initial target cost of $1.64607 billion and an initial target profit of $143.13 million. The price could be revised within 90 days after the end of the 37th month after the contract date. Under no circumstances, however, could the re-set price exceed an established price ceiling of 130 percent of the initial target cost or $2.1399 billion.

Furthermore, the GAO document supported the views of Senator Smith. The report concluded:

> While some consideration may have been given alternative methods of procuring these ships, we saw no evidence that the Navy performed a thorough analysis of alternatives to awarding a contract of this magnitude to one supplier or of the potential consequences of this action. Whether or not it would have been to the government's advantage to have these destroyers constructed in more than one yard does not appear to have been considered at that time and we have no firm data from which to assess that question.

Furthermore:

> Notwithstanding these efforts, the Navy's past experience over the years gives little encouragement that these destroyers really will be built to a single configuration.

The report went on:

> The Navy's objective is to build a single ship that will substantially reduce logistical and other problems that have plagued the Navy over the years. In the last analysis, this objective appears to have been the overriding and compelling consideration by the Navy throughout this whole procurement, and has been the primary reason for adhering to the concept of an award to a single contractor.
>
> We think that the substance of the Navy's rationale comes down to the desire to solve what are long standing problems by a standardized ship and to reduce the cost of acquisition as well as operations. However, by contracting with one company the risk is present that the company may not be able to complete the contract at the agreed price. It is possible that the company at some point could come to the Navy and say it is unable to build the ship for the contract price. Under these circumstances, the Navy would find itself with few options. The Navy says it does not expect that this is a real possibility, but it has occurred under other long-range production programs.

> We believe also that there is some danger to future competition. Given the Navy's premise of a single ship design (presumably Litton's) at the lowest price, it is difficult to see how another company will be able to compete pricewise with Litton on future orders. Start-up and early learning costs in such a program are substantial and, assuming the same ground rules are aplied in the future, it seems questionable as to whether anyone will be able to compete with the successful contractor in this award, no matter how many additional ships the Navy plans to buy. We are told that the differences in commercial and military ships, even if the Maritime program should become a reality, would not make the winner of these awards competitive for military ships.[4]

On August 28, 1970, Senator John Stennis of Mississippi, defended the award of the 30 destroyer DD-963 contract to one shipyard. He refuted the points presented in Senator Smith's argument, and he gave emphasis to the correctness of awarding the contract to one yard. In his conclusion, Mr. Stennis said that the Congress would be setting a poor precedent if it repudiated a contract that had already been awarded to a private firm by the Navy. He pointed out that the shipbuilding companies had been competing for the DD-963 since 1967, and that the ground rules for the contest stipulated that the winner would build all thirty ships. Essentially Mr. Stennis was comparing the DD-963 competition to a sporting event where one team had already won the game, but the officials decided to change the rules after the game had been played thereby disallowing the victory and forcing the winner to compete again under the new rules. Senator Stennis' position was in response to Mrs. Smith's action on the Senate floor and also to Amendment 811 that

had not yet been introduced by Senator Edmund Muskie, also from the state of Maine. The amendment would have required the DD-963 contract to have been divided among two domestic shipbuilders with the total number of destroyers being constructed at each yard approximately equal.

On August 31, 1970, Senator Muskie introduced a modified version of Amendment 811 which stipulated that the prime contractor would have to subcontract a substantially equal number of destroyers to another shipyard. Again Senator Stennis, this time supported by Senator Eastland of Mississippi, argued against such an amendment. Adding to his previous argument, he pointed out that the Congress had already turned down an amendment to have the DD-963 contract split. He was referring to the amendment proposed by Representative Louis C. Wyman, Republican of New Hampshire. If Wyman's amendment had passed, it would have required the construction of the thirty DD-963 destroyers in more than one shipyard. On April 30, 1970, the House of Representatives approved the amendment, but the Senate Armed Services Committee, working in closed session, voted to strike the amendment from the $20.2 billion defense procurement authorization bill. Interesting enough, Senator Stennis was the chairman of that committee.

In the end, Senator Muskie's amendment did not pass, but all of the breaks did not go in Litton's direction either. In November, 1970, the Court of Appeals said that Judge Bayard Rhone had erred in overturning the jury's

decision in the Noah Dietrich libel case. The court ordered a new trial.[5]

VII. CONGRESS CROSSES THE RIVER

On January 20, 1971, the Navy sent a letter to Litton Industries in which the company was informed that the Navy was planning to cut back its LHA program from nine ships to five. According to the Navy, there were two reasons for the cutback. First, the LHA program was compressed because of the overall reduction in the size of the United States military forces brought about by the gradual American withdrawal from Vietnam. Second, the Navy felt a growing need to acquire more destroyers, frigates, and attack submarines, rather than amphibian assault ships, to counter the expanding Soviet surface and submarine fleets. A third reason, though speculative, was that the Navy had become, in the words of one person at the Federal Maritime Commission, "very concerned and frightened"[1] about the problems that had been developing at the shipyard in Pascagoula. In the fall of 1969, Hurricane Camille struck the Gulf Coast causing significant damage to the Ingalls Shipbuilding Company. No lives had been lost, but roofs had been blown off numerous buildings, a 270-foot gantry crane had been toppled, and a 602-foot ship had been wrenched loose from its moorings and blown across the Pascagoula River where it had become mired in soft mud. The hurricane plus management mistakes and very acute startup problems were causing production delays and increased shipbuilding costs at the new

yard. Because of cancellation clauses in the LHA contract, Harry J. Gray, the senior executive vice president of Litton Industries, said that the Navy could be paying Litton at least $109.7 million for the termination of the four ships. This figure was confirmed when President Nixon sent his fiscal 1972 budget to Congress and requested $109.7 million to cover the cost of early contract termination.

In September, 1971, Ingalls shipyard suffered a strike which caused even further delays. During the same month, Litton announced that Fred W. O'Green would replace Harry J. Gray as Head of the corporation's defense and marine products group which included Ingalls Shipbuilding Company.

The following month, Margaret Chase Smith submitted to the Senate a summary report by the Federal Maritime Commission on Ingalls Shipbuilding. The report highlighted the circumstances surrounding the launching of the first commercial containership for Farrell Lines. On October 3, 1968, Litton contracted to build eight such ships; four for Farrell Lines and four for American President Lines. These were the first ships scheduled to be built at Litton's new automated shipyard on the West Bank. The ships for Farrell Lines were about fourteen months behind schedule on the average. The total lost time had been 1,702 days, and the contract specified that Litton would be charged $3,000 for each day of delay. The first ship for Farrell Lines was launched on June 26, 1971, and was scheduled for delivery on March 1, 1972. According to the contract, it

was supposed to be delivered on December 22, 1970. Three weeks after it had been launched, its superstructure sagged about half an inch. Furthermore, transverse bulkheads were out of alignment and shell frames were not evenly lined up with the floor. Farrell's officials were concerned about both the delays and poor construction. The four ships for American President Lines, on the other hand, were moved to the old yard on the East Bank when it was determined that they could not be built at the new facility. Knowledgeable people felt that Litton could lose $50 million on the eight containerships. The Navy was also concerned about Litton's shipbuilding operation because the LHA program was one year behind schedule.

In December, 1971, Congressman Burke of Massachusetts also had something to say about Ingalls Shipbuilding. The Fore River Shipyard in Quincy, Massachusetts was located in Mr. Burke's district. The congressman was not happy because the Fore River Shipyard was suffering from a lack of orders while Ingalls had a $3 billion backlog in government contracts. He presented an article from the December 9, 1971 issue of the Wall Street Journal entitled "Shipbuilding Setbacks--Delays, Problems at a New Shipyard Raises Fears that Navy's Fleet Modernization May be Delayed." The article reiterated the problems Ingalls had with the Austral Envoy (the first containership for Farrell Lines). The problems were a result of management turnover, manpower shortages, late deliveries, and shoddy workmanship. If these causes should continue, serious financial and technical problems

could hamper the Navy's two huge shipbuilding programs. Both the Navy and Litton maintained, however, that the startup problems encountered with the Austral Envoy were mostly being overcome. Even though, the then current price tag for the DD-963 destroyer program was $2.71 billion including government furnished equipment. That came to $90.5 million apiece. It was speculated that the cost would be driven up even further because of an escalation clause in the contract that covered the rising cost of materials and labor. Late delivery would also push the price higher.

On January 11, 1972, The New York Times reported that Congressman Les Aspin of Wisconsin charged the Navy with giving Litton a $3-million gift by changing the original delivery dates for the five landing helicopter assault ships. According to Aspin, the original delivery dates were scratched out and replaced with new dates that were twelve to fourteen months later than specified in the original contract. Because the LHA program was about one year behind, the Navy could have received $600,000 for each of the five ships.

On March 27, 1972, government auditors told the Subcommittee on Priorities and Economy of the Joint Economic Committee that Litton Industries had charged the Navy, from 1968 to 1971, $7 million for work that had been done on commercial ships in the same yard.

Shortly thereafter, the Wall Street Journal reported, on April 14, 1972, that the House Armed Services Committee had announced that it was going to investigate Litton's handling of the LHA and DD-963 programs. In a related matter, the newspaper reported that the Secretary of the Navy, John Chaffee, had rejected a Litton request to revise the LHA contract. The LHA program was at least eighteen months behind schedule.

On April 17, 1972, the first day of the closed hearings, Congressman Aspin addressed the full House. He announced that he had asked the GAO to investigate Litton's claim for $455 million in inflation charges on the DD-963 program. The Navy's estimate was for $310 million or a difference of $145 million between the Navy and Litton. According to Litton, the price for the destroyer program had risen to $2,244.2 million from the original contract price of $1,789.2 million.

Aspin also talked about the LHA program. The original contract called for nine ships at a program unit cost of $153.4 million. The total program cost came to $1,380.3 million. When the Navy cut the number of ships to five the total program cost dropped to $960 million, but the cost per ship rose to $192 million. Congress had already appropriated $941.7 million, including the $109.7 million cancellation fee, for the LHA program which meant it would have to appropriate approximately $19 million more to cover the estimated $960 million. Furthermore, Litton had informed

the Navy that it expected to reach ceiling on the LHA program which meant an additional $104 million had to be added to the $960 million. All totalled, Congress would have to appropriate an additional $123 million. Also, according to Admiral Kidd, the Chief of Naval Material Command, the first LHA would be nineteen months late. Other reports speculated that the fifth LHA would be two years late. Finally, Aspin attributed the shipyard's woes to startup, labor, and production problems. The yard had had difficulty in recruiting and retaining skilled labor and managerial personnel. The labor turnover rate at the West bank yard had been twice that of the East bank facility, and had been as high as fifty percent a year. Furthermore, some commercial ships and LHA's had been moved to the East bank where they would be constructed in the traditional manner. In closing, Congressman Aspin criticized the Navy for sinking $3 billion during a thirteen month period into a new and untested shipbuilding facility.

On May 23, 1972, Litton Industries reported a fiscal 1972 third quarter loss of $14.2 million, This was attributed to the company's shipbuilding operations which suffered a pretax write-off of $25.4 million. The write-off was due to setbacks on the LHA program and on the eight containerships.

In June, 1972, Litton announced that it would pay $5.5 million in claims to Farrell Lines and American President Lines for construction changes and delays on the eight containerships.

On July 26, 1972, Senator William Proxmire of Wisconsin made public a Navy letter to Litton dated June 23, 1972. The letter expressed concern about Litton's ability to complete the contract for the five amphibious assault ships. The letter also criticized Litton's proposal of March 31, 1972, in which the company requested a $270 million increase in price for the five ships plus a $109.7 million cancellation fee, the maximum provided for in the contract, for terminating four of them. Furthermore, the Navy's letter was critical of Litton's proposed revision to the LHA delivery schedule. The Navy claimed that Litton's revision would result in the first LHA being nineteen and a half months late while the fifth LHA could be as much as twenty-six months late. These delays, according to the Navy, could drastically effect the delivery of the following thirty DD-963 class destroyers.

Nevertheless, on August 31, 1972, the Navy announced that it would accept a major revision to the LHA contract. Originally, the Navy was to have paid Litton the costs incurred on the LHA program until September 1, 1972. From that date, the Navy was to have paid Litton based on the percentage of work completed. However the Navy had decided to pay Litton's costs until February 28, 1973. At the same time, John H. Warner, Secretary of the Navy, rejected Litton's claim for $379 million. He said that the claim had been unsubstantiated. Les Aspin, on the other hand, maintained that the Navy had "completely caved in to Litton's demands." [2]

VIII. GORDON RULE

On November 28, 1972, President Nixon announced the appointment of Roy L. Ash as the director of the White House Office of Management and Budget. Previously, Ash had headed the President's Advisory Council on Executive Organization. Ash said that he would sell his Litton stock, about 200,000 shares, and place the proceeds, about $2.5 million, in a blind trust. Furthermore, he would sever his connections with the company by December 9, 1972. Fred W. O'Green replaced Ash as president of Litton Industries. Ash took over his new duties on December 11, 1972.

On December 18, 1972, the Subcommittee on Priorities and Economy in Government of the Joint Economic Committee opened hearings to discuss cost overruns on major defense contracts. The subcommittee was headed by Senator William Proxmire. On the first day of the hearings Elmer Staats, head of the GAO, reported that the LHA program had serious problems. He told the committee that the original ceiling price for nine LHA's had been $1.19 billion or $133 million per ship. If Litton had its way, the cost could exceed $200 million per ship. Staats also estimated that the first LHA would be 23½ months late while the last one could be 32½ months late.

On the second day of the hearings, the committee heard from Gordon Rule, Director of the Procurement Control and Clearance Division of the Navy Material Command. He was very

critical of Ash's appointment as the director of the Office of Management and Budget:

> "Well," said Rule, "I think first, that old General Eisenhower must be twitching in his grave. He was the one who first called attention to the so-called military-industrial complex, and I frankly think we have added a new dimension....I think it is almost a military-industrial-executive department complex. I think it is a mistake for the President to nominate Mr. Ash, whom I have never met. I think it is a worse mistake for him to accept the job."[1]

Furthermore, Rule said that the free enterprise system had broken down in the area of giant defense contracts. Major contracting has become a "quasi-welfare industry" with the Government rescuing large companies from bankruptcy while allowing smaller firms to go out of business. The situation was being aggravated as top executives of the large contracting corporations went to work for the Federal Government. Rule was also unhappy about competitive bidding on large Government contracts. The procedure encourages contractors to reduce their prices at the last minute in an attempt to "buy-in" on the contract. In such cases where the drop in price was an obvious "buy-in," Rule recommended that an additional clause be placed in the contract stipulating that the company would be responsible for the first $500 million if financial difficulties developed. Rule stated, furthermore, that "modular construction" was not suitable for building 9 large complex warship such as the LHA which was as large as the Navy's World War II Essex class carriers.

On the day following his testimony before the subcommittee, Gordon Rule, sick in bed with laryngitis, was visited by Admiral Kidd. The Admiral handed him a letter of retirement and demanded his signature by the end of the day. Rule refused. Two days later he was transferred to the Anacostia Naval Air Station where he was assigned consulting duties at the Logistics Management School. The Civil Service Commission could do nothing for Rule because the transfer was technically a temporary reassignment rather than a disciplinary demotion. Rule's only alternative was to file a grievance, but this would have done little good because John Warner, who was in on the decision to transfer him, would have made the final decision.

The Rule affair was remarkably similar to action that had been taken against A. Ernest Fitzgerald who had been the Deputy Assistant Secretary of the Air Force. Fitzgerald had been transferred to Thailand to examine a bowling alley project after he criticized the cost overruns on the Air Forces C-5A program. According to Title 18 of the United Stated States Code, the penalty for intimidating witnesses before a Congressional committee was five years in jail and a $5,000 fine.

Senator Proxmire went to Rule's defense:

> After Rule gave his headline-making testimony criticizing Ash, Grumman and Litton, and the Navy moved against him, Proxmire invited Rule and Kidd to appear before his subcommittee together. Kidd declined, citing the prospect of Civil Service Commission proceedings on the matter as his reason. But the commission's general counsel decided that Rule's assignment to the training school

could not be classified an "adverse action" and said the commission could not act on it. This left Kidd without his excuse. The result was a spectacular confrontation on January 10 with Rule and Kidd seated side-by-side at the witness table before the irate Proxmire. The Senator began by denouncing the Navy's action against Rule as "the harassment of an able, dedicated and courageous public servant..." "The significance of this episode," he said, "goes far beyond the issue of shabby, unjust treatment of one outstanding employee. It goes to the very heart of the legislative process and the ability of the Congress to obtain information on the activities of the executive branch." Proxmire reminded Kidd that Federal law prohibited the obstruction of Congressional inquiry and noted that Richard Nixon, while a Senator, had once introduced legislation making it a Federal crime to intimidate public employees from testifying before Congress.[2]

Ironically, when Richard M. Nixon was a Senator from California, he said:

> Unless protection is given to witnesses who are members of the armed services or employees of the Government, the scheduled hearings will amount to no more than a parade of yes men for administration policies as they exist.[3]

Kidd, understandably, was on the defensive. He found himself acknowledging on the one hand that Rule "was probably the most competent gentlemen we had in matters of procurement," but insisting on the other that he had lost confidence in him because of his alleged loose attitude toward news leaks and his inability to abide by instructions as to what to say before Proxmire's subcommittee. But Kidd insisted he wasn't trying to withhold information from Congress. And despite his declining confidence in Rule, and the fact that Rule had been sent on an obviously trivial mission, Kidd maintained that he had not disciplined him. Flip-flopping again, Kidd insisted that Rule's comments before the subcommittee had damaged the negotiations

> with Grumman and Litton. Both Proxmire and Rule had a field day with these tangled explanations. How, demanded Proxmire, had Rule's remarks hurt the negotiations? "That would be a bit difficult to measure and quantify," replied Kidd. "In other words," said the Senator, "The Navy considered any discussion of Litton or Grumman taboo." "That is what I told him, Mr. Proxmire, yes, sir," answered Kidd. Rule broke in at one point to charge that since the rejection of the Avondale claim, the Navy had systematically been reducing his influence. "I know what is going on," he said. "And I know that Admiral Kidd probably thinks I am a burr up ---- and he wants me out." When Kidd recalled how he had been told that Litton, Grumman, and Rule would be his three major problems, Rule replied. "I hope he is not as screwed up in the negotiations with Litton and Grumman as he is with Rule." At another point, Rule said of Kidd, "This man has been in procurement 12 months, 13 months. All of a sudden he is an instant expert." What, Proxmire asked, was Kidd's response to that? "He is right," said Kidd, "he is right. I have no corner on the market on brains."[4]

Later, Rule told a reporter that the Navy was at a disadvantage at the negotiating table, because its representatives were so unexperienced when compared to those of the large contracting firms such as Litton and Grumman. Rule went on, saying there were two principal reasons why contractors submitted unrealistically low bids. First, in the Government's competitive bidding process, it is a good way to win a contract (buy-in). Second, there is pressure in the system to keep the bids artifically low so that the military programs will appear less costly to Congress. Once a large sum of money has been sunk into a program, military and DOD civilian managers know it is easier to get

more money to keep it going. Furthermore, Rule believed that everyone in a position to influence these matters stood to gain from large military expenditures. Once he made a list of all the people who could influence military spending. He could classify these people into ten groups ranging from Congressmen, to the military, to the contractors, to the labor unions. "Everyone involved wants something," he noted. "When all these turn on their respective powers, where does that leave the taxpayer?"[5]

In March, 1973, Gordon Rule was reinstated as the Navy's top civilian procurement official.

IX. CONCLUSION

After President Nixon announced Ash's appointment, Emmett Steele's lawsuit was settled out of court for $2.4 million. The award went to Steele's posthumous estate (Steele died in 1972). When asked the reason for the settlement, Ash replied that the jury would not judge the case on its merits, but rather, on the emotional aspect projected by a widow and her fatherless children.

On February 5, 1973, the Senate voted overwhelmingly to require the confirmation of Roy Ash as Director of the Office of Management and Budget. The vote followed a vigorous debate on two major issues. The primary issue was eloquently articulated by Senator Sam Ervin:

"The O.M.B. director is the second most powerful official in the Federal Government and it is essential that he be subject to the thorough scrutiny of the Senate."[1]

The secondary issue, and the motive for a minority of the bill's sponsors, was the desire to have Roy L. Ash undergo a Senate interrogation so that his background could be examined.

During the debate, Senator Humphrey said the Nixon Administration equated budget-making with policy-making, and that the 1974 budget had been the result of a year's secret planning by the Office of Management and Budget. It was the secrecy surrounding the planning of the Federal budget that made a mockery of democracy, according to

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Humphrey, because there had been no room for public or congressional participation. The Federal budget represented more than one-fourth of the Nation's GNP. Furthermore, Humphrey believed that the President was attempting to increase the power of the Office of Management and Budget at the expense of Congress.[2]

Previously, Senator Proxmire had criticized Litton for the mismanagement of Navy contracts while Ash had been president. Conflict of interest, according to Proxmire, was a real possibility with Ash as the Director of the Office of Management and Budget. The Senator also noted Ash's previous activities at Hughes Aircraft and the circumstances surrounding Emmett Steele's law suit.

In February and March, 1973, the news media disclosed that Litton had set up a $2 million cash pool for its top twenty-five executives on June 29, 1972--a few weeks after Litton informed the Navy that cash flow problems would develop if the LHA progress payments were stopped. By September, 1972, almost $600,000 had been loaned at four percent interest, including $165,000 to Fred W. O'Green.

On March 1, 1973, the Navy announced that it would pay Litton only $946 million for the five LHA's. Litton denounced the unilateral decision, claiming that she should receive $1.056 billion. The original target price for nine LHA's was $1.01 billion. Furthermore, the Navy gave Litton ninety days to pay back $55 million in previously advanced payments which the company had not yet earned due to

construction delays. The $55 million overpayment became visible when payments for the LHA program were switched from a cost basis to a progress basis on March 1, 1973. As a way to recoup the money, the Navy decided to halt its payments to Litton, which amounted to more than $3 million each week. If, at the end of three months, the $55 million had not been paid, then Litton would have to refund the rest. Litton, however, obtained a restraining order from the United States Federal District Court in Biloxi, Mississippi, which prevented the Navy from discontinuing the weekly payments. In June, 1973, the Justice Department asked the United States Court of Appeals for the Fifth Circuit, in New Orleans, to stay the court order requiring the Navy to continue the weekly payments to Litton. In October, 1973, the stay was granted and the Navy stopped making the weekly payments.

One month later, on November 10, 1973, the first DD-963 class destroyer was launched; six months ahead of schedule.

In January, 1974, the United States Court of Appeals in New Orleans said that the United States Federal District Court in Biloxi, Mississippi, did not have the jurisdiction to grant the injunction requiring the Navy to continue the more than $3 million per week payments to Litton. The junction was voided.

In March, 1974, Noah Dietrich was awarded $100,000 in compensatory damages in the retrial of his libel suit against Tex Thornton and Litton Industries. The jury had decided against awarding punitive damages.

By April 24, 1974, Litton had asked for a $350 million increase on the DD-963 program. This had raised the price to $2.14 billion from the original target price of $1.7892 billion. Litton had claimed that this was not a cost overrun, because the original ceiling price of $2.14 billion had not been exceeded. Instead this had been the one-time price adjustment allowed for in the contract. Furthermore, Litton was expecting additional costs of $485 million to cover the rising cost of materials on the destroyer program. In addition, some of the destroyers could be delivered as much as five months late.

By August, 1974, Congressman Aspin had been told by Navy officials that the last of the destroyers could be delivered as much as eighteen months late. Furthermore, the LHA program, which had already been two to three years behind schedule, had been delayed an additional year, and the cost of each ship had risen to $228.2 million from the original $153 million.

On November 17, 1974, a 75-member machinists' union unit posted pickets at the Ingalls Shipyard. By December there were 14,000 workers on strike. The strike was economically motivated and lasted until December 16, 1974. The strike ended with the signing of a thirty-seven month contract that provided for a twenty-four percent wage

increase. Furthermore, an employees' cost-of-living clause had been included in the contract for the first time.

On April 21, 1975, Litton disclosed that it had increased its LHA claims by an additional $130 million, bringing total claims on the five ship program to $504,847,000. Litton said the increase had been due to construction delays and the extraordinary rate of inflation since March, 1972, when the original claim for approximately $380 million had been submitted. The assault ships were two to four years behind schedule.

In April, 1976, the Defense Department decided to settle its shipbuilding claims by resorting to a special law that allowed the Secretary of Defense to unilaterally modify defense contracts in the interest of national security.[3] The claims, approximately $1.9 billion, involved eleven contracts and four shipbuilding companies. The Pentagon estimated the claims could be settled for $700 million, but the money would have to be appropriated by Congress. In June, after two months of negotiations, the Pentagon announced that its plan had failed. Two of the companies, Ingalls Shipbuilding and Newport News, did not accept the Pentagon's proposal.

Personnel on the Business Review Staff at the Navy's contract administration office in Pascagoula shed further light on Litton's shipbuilding operation. The new shipyard on the West bank had been designed and originally

administered by aerospace personnel from Culver City, California. These people knew little about shipbuilding. The new yard had been designed to be operated by unskilled workers. Consequently, the aerospace managers who originally administered the new yard resisted hiring skilled workers from the east bank yard because of the original design intent and because the new managers believed it would be difficult to teach these workers new methods. Furthermore, the designers overestimated the availability of ship construction workers. Building a stable labor force has been, interestingly enough, an industry wide problem. Ship construction is not pleasant from the laborer's point of view. It requires long hours of hot and heavy work. At Ingalls the situation has been aggravated by the hot climate. Before the west bank yard had been built, the east bank employed about 9,000 people. Today, total employment at Ingalls is between 23,000 and 25,000 people. This kind of growth attracts non-skilled, transient workers who want to become wealthy in a hurry. When they discover that they are not going to become rich overnight, they either quit or are terminated for poor attendance. The current labor turnover rate at Ingalls is five percent a month.

When the west bank's method of modular construction developed serious problems, Litton put Ned Marandino in charge of both yards at Ingalls in July 1972. Marandino, who had previously headed the old east bank yard, replaced most of the west bank yard's aerospace management personnel

with top and middle management people from the east bank yard. He also transferred skilled workers from the east bank to the west bank. Marandino's plan was to combine the two yards under one management and to build the Navy's ships in the traditional manner. Under the new plan the ships were to be constructed on the west bank. They would be launched, when they were forty to sixty percent complete, and floated across the Pascagoula river to the outfitting piers on the east bank. It was discovered, however, that the west bank yard could produce ships faster than the east bank yard could outfit them. This caused bottlenecks which forced the company to revert back to the modular method of construction on the west bank. Under the modular method, ships were launched when they were seventy to seventy-five percent complete. To reduce congestion further, the company has been using both the east and west bank piers for outfitting.

Nevertheless, traditional shipbuilding methods had been used to construct the first LHA and the first and second DD-963 class destroyers. The original estimate of production manhours required to build these ships had been based on the premise that the company would use the modular method of construction which required less production labor than the traditional method. Thus, the company had underestimated the production manhours required. The company has admitted that they had been overoptimistic in their production manhour estimates. Litton's underestimation

of labor required plus her overestimation of labor available has placed her in a very tenuous position.

One of the most significant reasons why Litton has been projecting a loss on the LHA program has been the extraordinary rate of inflation over the past few years. Escalation clauses have provided relief up to the delivery dates specified in the original contract. Escalation payments have been paid separately up to the original delivery dates, however, escalation payments have not been paid after those dates. This has placed the company in a very precarious position, because the first LHA is two to three years behind schedule, and the last LHA is five years late. At least one person on the Business Review Staff expressed an opinion that escalation clauses should provide for payments up to the actual delivery date.

An outsider leaves the Business Review Office with the impression that Litton is now performing adequately on the Navy's shipbuilding programs. The one major drawback, however, has been the LHA. The assault ship is too big and too complex for modular construction. Furthermore, there are only five of them; hardly enough to take advantage of the learning curve. The DD-963 destroyer, on the other hand, appears to be suited for the modular method of construction. It is considerably smaller than the LHA, and there are more of them.

At least one individual on the Business Review Staff is not optimistic about the concept of total package procurement of Navy ships. The awarding of one shipbuilding

contract, where the development and production portions have been separated by a reset provision, has not worked out too well for the Navy. Past experience hints that two separate contracts, one for development and one for production, will be written in the future.

There is no doubt that Litton had been too optimistic and had underestimated the startup costs for the new yard, however, one should not forget that it was a new yard, and that Litton has been a pioneer in the American Shipbuilding industry. One person on the Business Review Staff was doubtful that any other organization could have done better than Litton. Furthermore, the Navy's ships would have been more expensive had they been built in a Naval Shipyard.

A conversation with Commander Ray Harbrecht, commanding officer of the U.S.S. Spruance (DD-963), revealed that the first DD-963 destroyer has outperformed all specifications. Commander Harbrecht has been very pleased with the performance of the U.S.S. Spruance on its six month shakedown cruise. He was also impressed with the performance of Ingalls Shipyard on the 2-month post shakedown availability (PSA). The following is a letter from Commander Harbrecht to Leonard Erb, president of Ingalls Shipbuilding:

COMMANDING OFFICER
U.S.S. SPRUANCE (DD-963),
FPO NEW YORK, N.Y., MAY 21, 1976.

Dear Mr. Erb: USS Spruance completed her post shakedown availability on 21 May, 1976. During my nineteen years in the Navy, having served in eight different ships, I can say without equivocation that the PSA was the most productive shipyard availability I have observed. The timely completion of over 800 jobs was made possible only by the concerted efforts of all personnel working on board. The interest in the ship, willingness to work with the Spruance crew, care exhibited in workmanship, and efforts to keep the ship clean were exceptional. Please convey to the employees of Ingalls Shipbuilding our sincere appreciation for a magnificant job.[4]

Ray Harbrecht
Commander, USN.

On June 29, 1976, Fred W. O'Green, president of Litton Industries, announced that Ingalls would stop work on the LHA program on August 1, 1976, if a financial settlement had not been reached by that date. William Clements, Deputy Secretary of Defense, maintained, however, that Litton would complete the contract, and the Navy would get its ships.

The final chapter on Litton-Ingalls Shipbuilding may not be written for many years. In the meantime, however, it appears that the courts will have to address some very penetrating questions such as: Who will ultimately pay for the mistakes committed and the dollars spent? Who will benefit from the knowledge gained and the products produced? Will it be the 150,000 Litton stockholders or will it be the 220 million American taxpayers? The answers to

these questions may have far reaching consequences for the future of the American economic system.

APPENDIX A

CHRONOLOGICAL LIST OF KEY DATES

1910: Ingalls Industries founded in Birmingham, Alabama.

1913: Charles Bates Thornton's birth in Haskell, Texas.

1918: Roy L. Ash's birth.

1934: Thornton goes to work at Department of Interior.

1936: America's first all-welded tanker built by Ingalls.

1937: Thornton receives Bachelor of Commercial Science Degree.

1938: Ingalls bids on four C3 cargo ships.

1941: Tex joins the Army.

1947: Ash graduates from Harvard.

1948: Thornton hired by Hughes Aircraft.

1949: Ash hired by Hughes Aircraft.

1951: Ingalls receives first Navy contract; Robert Ingalls Sr. dies; irregularities in inventory accounts at Hughes Aircraft noticed by accountants.

1952: Accountants at Hughes Aircraft resign.

1953: Thornton and Ash leave Hughes Aircraft and set up Litton Industries.

1955: Lanier gets $500,000 to set up submarine and nuclear training program.

1956: Ingalls receives first submarine contract.

1957: Ingalls receives first nuclear submarine contract.

1958: Jamieson resigns; Litton acquires Monroe Calculating Company.

1959: Steele files suit.

1961: Litton acquires Ingalls.

1962: Noah Dietrich's deposition.

1965: Steele awarded $7.6 million.

1966: DiBona's article appears in U. S. Naval Institute Proceedings.

1968: Litton has first earnings drop; construction begins on new West Bank shipyard.

1969: Litton receives LHA contract.

1970: Litton awarded DD-963 destroyer program.

1972: Proxmire chairs Senate subcommittee on Priorities and Economy in Government; Ash appointed as director of OMB; Gordon Rule loses position as director of procurement.

1973: Gordon Rule reinstated.

1976: Pentagon announces proposal to settle shipbuilding claims; Litton rejects Pentagon's proposal; Litton announces it will stop working on LHA program.

APPENDIX B

SHIPBUILDING PRODUCTION 1960-1971

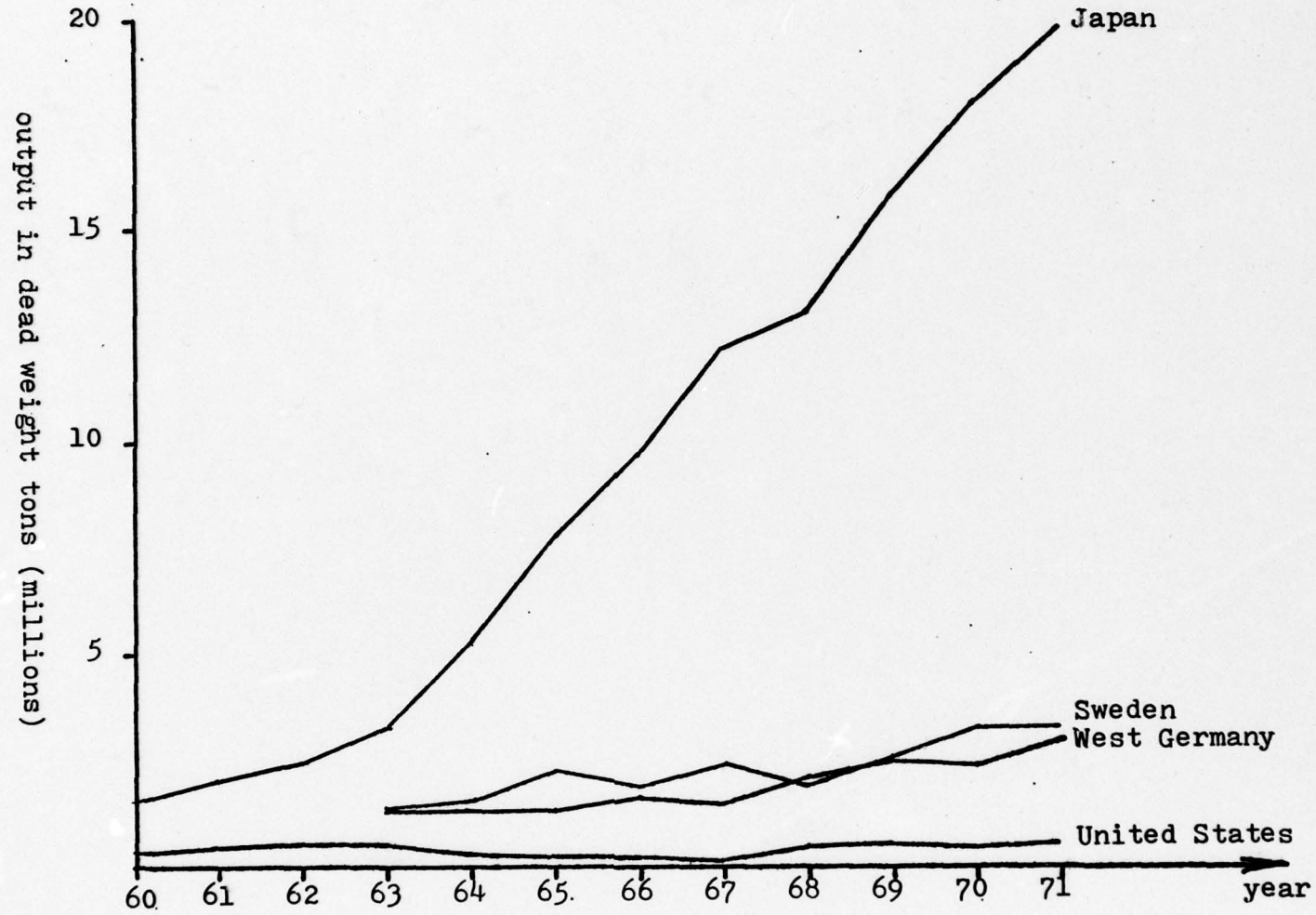
COUNTRY	'60	'61	'62	'63	'64	'65	'66	'67	'68	'69	'70	'71
United States	427	523	488	519	297	237	198	147	411	625	506	647
W. Germany				1,401	1,267	1,304	1,658	1,519	1,938	2,597	2,381	3,080
Sweden				1,439	1,548	2,073	1,805	2,230	1,786		3,193	3,190
Japan	1,602	2,006	2,370	3,231	5,257	7,837	9,737	12,051	12,961	15,663	17,851	19,494

1. Figures represent deadweight tonnage (dwt) produced (in 1000's)

2. Merchant vessels over 2000 dwt.

Source: Commission on American Shipbuilding.

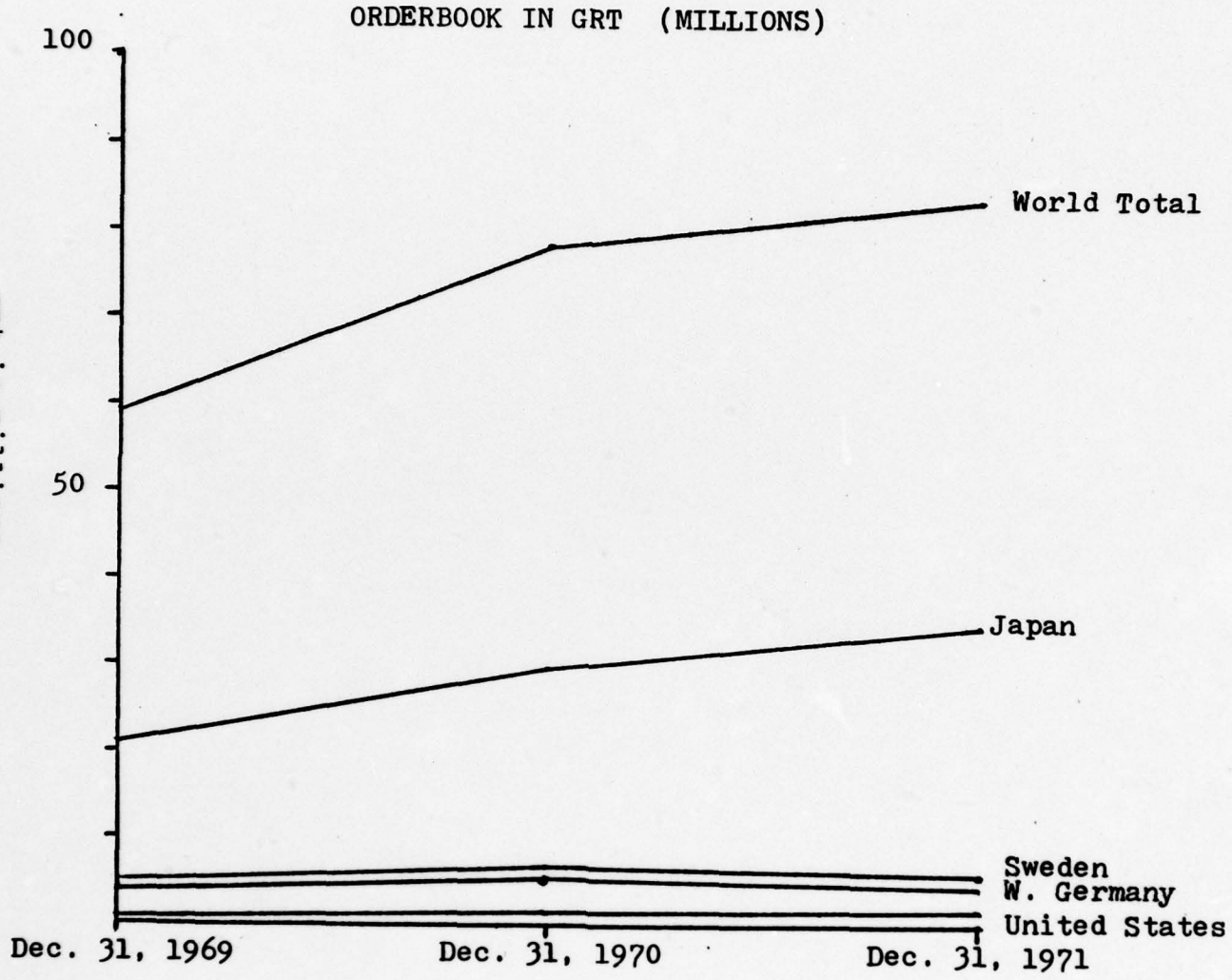
SHIPBUILDING PRODUCTION 1960-1971



ORDERBOOK IN GRT. (MILLIONS)

Country	December 31, 1969	December 31, 1970	December 31, 1971
W. Germany	4.2847	5.3883	4.6542
Japan	21.0388	29.3572	34.0527
Sweden	5.5585	6.8466	5.9150
United States	1.5115	1.6841	2.0654
World Total	59.8317	78.3010	83.6599

Source: Report of the Commission on American Shipbuilding, Vol. III, pp. 168-70.


ORDERBOOK IN GRT (MILLIONS)
100
50
grt in millions
World Total
Japan
Sweden
W. Germany
United States
Dec. 31, 1969
Dec. 31, 1970
Dec. 31, 1971

WORLD ORDERBOOK (1972-1976) IN DWT.

Japan	59,168,311
Sweden	13,493,501
W. Germany	6,668,254
United States	2,867,681
World Total	137,124,221

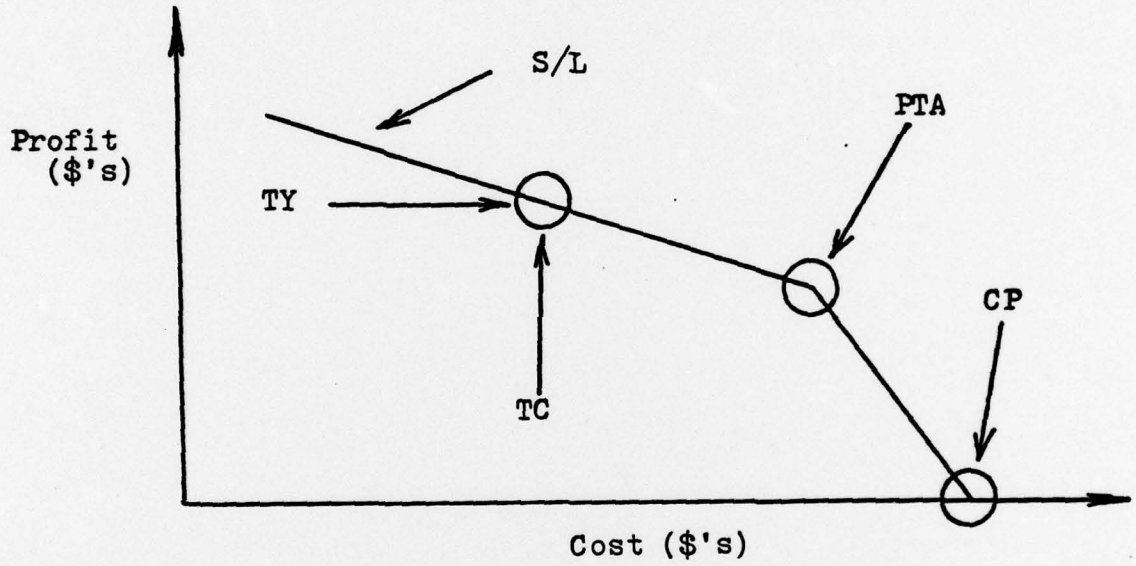
SOURCE: Report of Commission on American Shipbuilding
Vol. III, p. 714.

APPENDIX C

FIXED-PRICE INCENTIVE CONTRACT

target price = target cost + target profit

celing price = target cost x negotiated percentage



TC = target cost

TY = target profit

CP = ceiling price

S/L = share line

PTA = point of total assumption

$$PTA = \frac{\text{Ceiling Price - Target Price}}{\text{Government Share}} + \text{Target Cost}$$

example for DD-963:

TC = $1.64607 billion

TY = $ .14313

CP = $2.1399

S/L= 85/15

Then:

$$PTA = \frac{2.1399 - (1.64607 + .14313)}{.85} + 1.64607$$

$$= \frac{2.1399 - 1.7892}{.85} + 1.64607$$

PTA = $2.05607 billion

FIXED-PRICE INCENTIVE, SUCCESSIVE TARGET (FPIS) CONTRACT

The fixed-price incentive, successive target contract is the same as the fixed price incentive contract except that a new target price can be negotiated at one or more specified future dates. In the case of the DD-963 there was only one reset date (within ninety days after the end of the thirty-seventh month after the execution date of the contract). In no case, however, can the new target price exceed the original ceiling price.

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