Chapter 1 : The Telex Service

The telex network was a public switched network of teleprinters similar to a telephone network, for the purposes of sending text-based theinnatdunvilla.com was a major method of sending written messages electronically between businesses in the post World War II period.

Keybridge House As early as , it was realised that additional telex switching would soon be urgently needed and thus a site in South Lambeth Road, Vauxhall was obtained By there were eleven SPC exchanges, plus another being developed for Cambridge. The last Strowger Telex exchange closed in August As digital exchanges were deployed the number of switching points was reduced. The network covered the whole of the UK and offered a high degree of built-in resilience through diversely routed dual path network configurations. Past, Present - and Future? It was written to mark the closure of the last BT Strowger Telex exchange in the summer of , but was held up awaiting a suitable slot for publication. The CMC exchanges have been rationalised to fewer sites, but still retaining the UK geographic numbering scheme. Customers can connect to exchanges by X. Telex over IP is quite a hot topic now, too. GTS is becoming quite competitive now, and several other network operators are pitching for business, particularly Swisscom. Some surprisingly large countries are abandoning Telex altogether, notably Poland. In terms of numbers of lines, SecureStream is quite a success, as there are nearly as many as Telex customers. Main users are several water companies for telemetry - flow rates, reservoir levels, etc. One of the courier companies uses it for vehicle tracking. Although Telex is widely dismissed as an outmoded relic of a bygone era, it still has the advantage over e-mail of communicating over real-time, end-to-end connections -- with the answerback facility confirming the connection to the called terminal and its identity, rather than launching messages into cyberspace and hoping that they arrive. This is a major consideration for communications such as time-sensitive financial information. BT and SwissTelex signed an agreement which allowed BT Telex subscribers in the UK to retain their telex identity number s and answerback , with the international access code When the contract was placed with Canadian Marconi Company for their exchanges in the early s, the question arose as to what colour the 19" racks should be. CMC offered any colour in the BS range; their usual offering was an attractive dark blue and light grey, but this was felt to be a change too far by British Telecom, then still part of the Post Office, and so it had to be good old Light Straw! Meanwhile, another part of BT wanted something distinctive for the new System X telephone exchanges, so they opted for an attractive dark blue and light grey. Also used as catch-all if call fails for other reasons. Called line has new number, call may be automatically forwarded. April and April With thanks to John Lamble and Chris Drewe. Page last updated 4th July All logos and trade marks are the property of their respective owners and are used on the Light Straw site s for review only. Students and researchers are recommended to make their own independent enquiries as to the accuracy of the information contained therein.

Chapter 2 : ITU-T Recommendation series structure

The statistic depicts the billed revenues for international telex services from the United States between and In , the billed revenues for international telex services were

The signal current made a readable mark on a moving paper tape soaked in a mixture of ammonium nitrate and potassium ferrocyanide, which gave a blue mark when a current was passed through it. A Baudot keyboard, David Edward Hughes invented the printing telegraph in ; it used a keyboard of 26 keys for the alphabet and a spinning type wheel that determined the letter being transmitted by the length of time that had elapsed since the previous transmission. The system allowed for automatic recording on the receiving end. The system was very stable and accurate and became the accepted around the world. Each character was assigned a unique code based on the sequence of just five contacts. Operators had to maintain a steady rhythm, and the usual speed of operation was 30 words per minute. The first practical automated system was patented by Charles Wheatstone, the original inventor of the telegraph. The transmitter automatically ran the tape through and transmitted the message at the then exceptionally high speed of 70 words per minute. A system of two teleprinters, with one operator trained to use a typewriter, replaced two trained Morse code operators. The teleprinter system improved message speed and delivery time, making it possible for messages to be flashed across a country with little manual intervention. This yielded only thirty-two codes, so it was over-defined into two "shifts", "letters", and "figures". An explicit, unshared shift code prefaced each set of letters and figures. A Siemens T Telex machine By , message routing was the last great barrier to full automation. Large telegraphy providers began to develop systems that used telephone-like rotary dialling to connect teletypewriters. Telex machines first performed rotary-telephone-style pulse dialling for circuit switching and then sent data by Baudot code. This "type A" Telex routing functionally automated message routing. Telex began in Germany as a research and development program in that became an operational teleprinter service in The service was operated by the Reichspost Reich postal service and had a speed of 50 baud â€" approximately 66 words-per-minute. At the rate of Transatlantic telegraph cable and Submarine communications cable Soon after the first successful telegraph systems were operational, the possibility of transmitting messages across the sea by way of submarine communications cables was first mooted. One of the primary technical challenges was to insulate the submarine cable sufficiently to prevent the current from leaking out into the water. In , a Scottish surgeon William Montgomerie [47] introduced Gutta-percha , the adhesive juice of the Palaquium gutta tree, to Europe. Michael Faraday and Wheatstone soon discovered the merits of gutta-percha as an insulator, and in , the latter suggested that it should be employed to cover the wire which was proposed to be laid from Dover to Calais. It was tried on a wire laid across the Rhine between Deutz and Cologne. Walker , electrician to the South Eastern Railway , submerged a two-mile wire coated with gutta-percha off the coast from Folkestone, which was tested successfully. The first undersea cable was laid in and connected London with Paris. After an initial exchange of greetings between Queen Victoria and President Napoleon , it was almost immediately severed by a French fishing vessel. The Eastern Telegraph Company network in The Atlantic Telegraph Company was formed in London in to undertake to construct a commercial telegraph cable across the Atlantic Ocean. The cable only operated intermittently for a few days or weeks before it failed. The study of underwater telegraph cables accelerated interest in mathematical analysis of very long transmission lines. An overland telegraph from Britain to India was first connected in but was unreliable so a submarine telegraph cable was connected in Australia was first linked to the rest of the world in October by a submarine telegraph cable at Darwin. From the s until well into the 20th century, British submarine cable systems dominated the world system. This was set out as a formal strategic goal, which became known as the All Red Line.

Chapter 3 : Telex | communications | theinnatdunvilla.com

Telex, international message-transfer service consisting of a network of teleprinters connected by a system of switched exchanges. Subscribers to a telex service can exchange textual communications and data directly and securely with one another.

What exactly is the telex network? The communications session can be either be a real-time two-way keyboard-based conversation between 2 Telex subscribers or a simple straight forward typed message that has been prepared earlier offline for later automatic transmission. Telex is still the only form of transmission system which is legally recognized as possessing full legal document status. Governments use this medium extensively so they make sure that it is a reliable, up-to-date and well-maintained network. Telex offers the safeguard of the typed word. It is a reliable dedicated network that has stood the test of time and developed technologically for over 50 years. How big is the telex network and who uses it? There are approximately 1. In , British Telecom won a contract worth up to half a million Pounds to provide a telex-based charge card authorization service to American Express. Because of erratic telephone communications in Africa, American Express cards could not be used. But now by using telex, American Express can now give immediate authorization on all its card transactions and it now has a system which can be used from telex machines anywhere in the world including East European countries. Today May Telex Network undergoing a revival. So successful is this usage of the telex network to provide the signalling medium that Lloyds Trustee Savings Bank has entrusted it for its property and panic alarm requirements across its sites and has increased its requirement to between 1, and 2, circuits. The UK dedicated telex network has been modernised so that this revitalised network incurs virtually no capital cost, whilst continuing to attract revenue. Allan Renton, head of telex support and engineering explains, "We supply the customer with an SS circuit that is tied into the telex network and the customer purchases a modem and interface to hook up with the building monitoring panel. Once these are installed, the customer can use the network [with] whatever type of data they choose to send anywhere in the UK. A secure, switched messaging service that conforms to international transmission standards. The telex network is used by government and business so the powers that be make sure this network works perfectly. Where the telephone systems do not perform well as in some countries in Africa, the telex network is maintained on a seperate telegraph network. Low line current on some telephone systems cause problems to facsimile transmission. A telex message consists of typed text using telex-compatible equipment either stand-alone or computer-based linked to a telex interface. The telex network is constantly being developed internationally using Intelligent Network technology. A facsimile message has to be prepared beforehand. It can be typed, hand-written or contain graphics. Telex transmissions confirm and authenticate delivery from sender to receiver, and vice versa, through the exchange of strictly controlled answerback codes by the controlling telex administration. Telex directory enquiries can unpack the senders name and address from answerbacks, this means telex is one of the safest and most reliable ways for use as primary communications. As it is the facsimile machine users responsibility to key in the Station ID, this can easily be changed or withheld, so the caller is never really sure that the message has reached the correct receiver. Facsimile machines can easily be moved from one telephone line to another and not all users may be diligent to change the station ID accordingly. In a pile of incoming facsimile messages, personal chit-chat messages can easily hide an important message. The sender of a telex message can be confident that the message will arrive perfectly at the distant end. Exchange of answerbacks after transmitting a telex message ensures that connection is still established with the distant end before the sender terminates the call. Horizonal streaks with missing lines on received faxes are a result of a poor telephone connection or could be low line current from distant countries. Getting a repetition from far flung places could well be a chore. The writing implements some folk use to compile facsimile messages may make them hard to read at the distant end. Live keyboard two-way conversations can be had with the telex system. Once the document has gone past the scanner and the wait time for more sheets has finished, the facsimile machine automatically clears down. Technically, what happens when a telex message is sent? You can now send a telex message via the internet from a PC. Telex

has two divisions of signalling, Type A and Type B. Type A signalling is where the keyboard is used to type in the called telex number. Type B signalling is where the telex dial is used to send the wanted telex number. The telex equipment started with mechanical teleprinters, now the latest teleprinters are built around a microprocessor, disc drive, keyboard, VDU, printer together with word processor software to enable the operator to prepare, edit and store messages for later onward transmission. Telex computer software, telex forwarding services using Email-to-Telex, Real-Time conversational and store-and-forward via the Internet, all enhance the Telex network with the secure knowledge that you cannot unsuspectingly download a virus from a telex call. The operator checks that the answerback code is the desired one and signalling by ITA 2 5-unit code 5-unit code history can commence in either direction alternatively. Answerback codes consist of a pre-determined set of 20 characters signifying the telex number, customer name and the country of origin. International telex directories exist for unpacking answerback codes.

Chapter 4 : Telex Telecommunications Network Basic Frequently Asked Questions

Note: Citations are based on reference standards. However, formatting rules can vary widely between applications and fields of interest or study. The specific requirements or preferences of your reviewing publisher, classroom teacher, institution or organization should be applied.

Maritime Reporter, May 14 foot motor yachts. New York—90 Route 22, Springfield, N. The Magnavox Terminal provides two-way voice, telex, highspeed data and facsimile transmission between ships operating in the Atlantic and Pacific Oceans and land destinations through the Marisat Allegro Ltd. For more information, contact Butterworth Systems Inc. A shoreside caller can obtain a complete report with a simple telex message to the ship. Upon receipt of a coded command, the ESZ automatically returns a position report via telex. Telephone ; telex Or Butterworth Systems Inc. Otherwise, ship-to-shore it came crashing down. And, was doing at that point: Semship RS Managing Agents: Swan Hunter International Ltd. Call or Write for Further Details: Geared for 66 long tons make-Clarke! All items subject to prior sale. Call us for additional quotations. May 15, - Maritime Reporter and Engineering News page: Hugh Sturdivant S. Birmingham B6 4AP, England. Representati Organisation are available to the U. The organisation has some 60 service stations throughout May 15, - Maritime Reporter and Engineering News page: The tug , Texas , TWX: Call or write for details and our catalog. Box , Morgan City.

Chapter 5 : Telex | Revolvy

The term, TELEX is the contraction of the two words TELegraph EXchange. Telex service in the United Kingdom was a fully automatic teleprinter switching system, which enabled subscribers to call each other at any time - day or night - and to communicate in print.

This article is about the teleprinter network. For other uses, see Telex disambiguation. A Teletype Model 32 used for Telex service The telex network is a switched network of teleprinters similar to a telephone network, for the purposes of sending text-based messages. The term refers to the network, not the teleprinters; point-to-point teleprinter systems had been in use long before telex exchanges were formed starting in the s. Teleprinters evolved from telegraph systems, and like the telegraph they used the presence or absence of a pre-defined level of current to represent the mark or space symbols. This is as opposed to the analog telephone system, which used differing voltages to encode frequency information. For this reason, telex exchanges were entirely separate from the telephone system, with their own signalling standards, exchanges and system of "telex numbers" the counterpart of a telephone number. When telephone and telex exchange equipment was co-located, which was not uncommon, the different signalling systems would sometimes cause interference. Telex provided the first common medium for international record communications using standard signalling techniques and operating criteria as specified by the International Telecommunication Union. Customers on any telex exchange could deliver messages to any other, around the world. To lower line usage, telex messages were normally first encoded onto paper tape and then read into the line as quickly as possible. The system normally delivered information at 50 baud or approximately 66 words per minute encoded using the International Telegraph Alphabet No. In the late days of the telex networks, end-user equipment was often replaced by modems and phone lines as well, reducing the telex network to what was effectively a directory service running on the phone network. Development A Siemens T telex machine A late-model British Telecom "Puma" telex machine of the s Telex began in Germany as a research and development program in that became an operational teleprinter service in The service, operated by the Reichspost Reich postal service [1] had a speed of 50 baud â€" approximately 66 words per minute. Telex service spread within Europe and particularly after around the world. Long before automatic telephony became available, most countries, even in central Africa and Asia , had at least a few high-frequency shortwave telex links. Often, government postal and telegraph services PTTs initiated these radio links. The cost of TOR equipment has continued to fall. Although the system initially required specialised equipment, as of many amateur radio operators operate TOR also known as RTTY with special software and inexpensive hardware to adapt computer sound cards to short-wave radios. Telex served as the forerunner of modern fax , email , and texting - both technically and stylistically. Abbreviated English like "CU L8R" for "see you later" as used in texting originated with telex operators exchanging informal messages in real time â€" they became the first "texters" long before the introduction of mobile phones. Telex users could send the same message to several places around the world at the same time, like email today, using the Western Union InfoMaster Computer. This involved transmitting the message via paper tape to the InfoMaster Computer dial code and specifying the destination addresses for the single text. Operation and applications Telex messages are routed by addressing them to a telex address, e. Ericsson in Sweden and S is the country code. Solutions also exist for the automatic routing of messages to different telex terminals within a subscriber organization, by using different terminal identities, e. A major advantage of telex is that the receipt of the message by the recipient could be confirmed with a high degree of certainty by the " answerback ". At the beginning of the message, the sender would transmit a WRU Who aRe yoU code, and the recipient machine would automatically initiate a response which was usually encoded in a rotating drum with pegs, much like a music box. The position of the pegs sent an unambiguous identifying code to the sender, so the sender could verify connection to the correct recipient. The WRU code would also be sent at the end of the message, so a correct response would confirm that the connection had remained unbroken during the message transmission. This gave telex a major advantage over group 2 fax which had no inherent error-checking capability. The usual method of operation was that the message would be prepared

off-line, using paper tape. All common telex machines incorporated a 5-hole paper-tape punch and reader. Once the paper tape had been prepared, the message could be transmitted in minimum time. Telex billing was always by connected duration, so minimizing the connected time saved money. However, it was also possible to connect in "real time", where the sender and the recipient could both type on the keyboard and these characters would be immediately printed on the distant machine. Telex could also be used as a rudimentary but functional carrier of information from one IT system to another, in effect a primitive forerunner of Electronic Data Interchange. The sending IT system would create an output e. The tape would be sent by telex and collected on a corresponding paper tape by the receiver and this tape could then be read into the receiving IT system. One use of telex circuits, in use until the widescale adoption of X. In addition to permitting email to be sent to telex, formal coding conventions adopted in the composition of telex messages enabled automatic routing of telexes to email recipients. This service supplemented the existing international telex service that was put in place in November Canadian telex customers could connect with nineteen European countries in addition to eighteen Latin American, African, and trans-Pacific countries. This used the telephone network in conjunction with a Teleprinter 7B and signalling equipment to send a message to another subscriber with a Teleprinter, or to the Central telegraph Office. In as the traffic increased it was decided to have a separate network for Telex traffic and the first manual exchange opened in London. By the public inland Telex service opened via manually switched exchanges. A number of subscribers were served via automatic sub-centres based on Post Office relays and Type 2 Uniselectors acting as concentrators for the manual exchange. In the late s the decision was made to convert to automatic switching and it was completed by , based on 21 exchanges, spread across the country, with one international exchange, based in London. The equipment used the Strowger system for switching, as was the case for the telephone network. User numbers increased over the following years into the s. A separate service "Secure Stream " prev. Circuit Switched Data Network was a variant of Telex running at baud, used for telemetry and monitoring purposes by utility companies and banks, as example. This was a high security virtual private wire system with a high degree of resilience through diversely routed dual path network configurations In British Telecom stopped offering the Telex service to new customers and discontinued the service in , allowing users to transfer to Swiss Telex if they wished to continue to use Telex. TWX used the public switched telephone network. Any remaining "3-row" Baudot customers were converted to Western Union Telex service during the period to Bell Canada retained area code until ; its remaining numbers were moved to non-geographic area code The modem for this service was the Bell dataset, which is the direct ancestor of the Bell modem that launched computer time-sharing. The was revolutionary because it ran on ordinary unconditioned telephone subscriber lines, allowing the Bell System to run TWX along with POTS on a single public switched telephone network. International, in the summer of with limited service to London and Paris. Further, all Chicago-based customers had telex numbers that started with a first digit of "2". This numbering plan was maintained by Western Union as the telex exchanges proliferated to smaller cities in the United States. The Western Union Telex network was built on three levels of exchanges. Each of these cities had the dual capability of terminating telex customer lines and setting up trunk connections to multiple distant telex exchanges. The second level of exchanges, located in large cities such as Buffalo, Cleveland, Miami, Newark, Pittsburgh and Seattle, were similar to the highest level of exchanges in capability of terminating telex customer lines and setting up trunk connections. However, these second level exchanges had a smaller customer line capacity and only had trunk circuits to regional cities. The third level of exchanges, located in small to medium-sized cities, could terminate telex customer lines and had a single trunk group running to its parent exchange. Loop signaling was offered in two different configurations for Western Union Telex in the United States. The first option, sometimes called local or loop service , provided a 60 milliampere loop circuit from the exchange to the customer teleprinter. The second option, sometimes called long distance or polar was used when a 60 milliampere connection could not be achieved, provided a ground return polar circuit using 35 milliamperes on separate send and receive wires. By the s, and under pressure from the Bell operating companies wanting to modernize their cable plant and lower the adjacent circuit noise that these telex circuits sometimes caused, Western Union migrated customers to a third option called F1F2. This F1F2 option replaced the DC voltage of the local and long distance options with

modems at the exchange and subscriber ends of the telex circuit. USA based Telex users could send the same message to several places around the world at the same time, like email today, using the Western Union InfoMaster Computer. The Western Union Telegraph Company had given up its international telegraphic operation in a bid to monopolize U. The result was a de-emphasis on telex in the U. In , it was purchased by MCI International. TRT eventually became the national carrier for many small Central American nations. It laid undersea cable from the U. It was formed by Monsieur Puyer-Quartier. TL is still based in Akron. Bell Telex users had to select which IRC to use, and then append the necessary routing digits. Decline Telex is still in operation, but has been mostly superseded by fax , email , and Society for Worldwide Interbank Financial Telecommunication , although radiotelex , telex via HF radio , is still used in the maritime industry and is a required element of the Global Maritime Distress and Safety System. See Telegraphy Worldwide status of telegram services for current information in different countries.

Chapter 6 : â€¢ Billed revenues: international telex services from the U.S. | Statistic

INTERNATIONAL TELEX AND TRANSMISSION SERVICE, INC. has been set up 3/2/ in state FL. The current status of the business is Inactive. The INTERNATIONAL TELEX AND TRANSMISSION SERVICE, INC. principal adress is HARRISON ST., TAMPA, FL,

Development[edit] A late-model British Telecom "Puma" telex machine of the s Telex began in Germany as a research and development program in that became an operational teleprinter service in The service, operated by the Reichspost Reich postal service [1] had a speed of 50 baud â€" approximately 66 words per minute. Telex service spread within Europe and particularly after around the world. Long before automatic telephony became available, most countries, even in central Africa and Asia , had at least a few high-frequency shortwave telex links. Often, government postal and telegraph services PTTs initiated these radio links. The cost of TOR equipment has continued to fall. Although the system initially required specialised equipment, as of [update] many amateur radio operators operate TOR also known as RTTY with special software and inexpensive hardware to adapt computer sound cards to short-wave radios. Abbreviated English like "CU L8R" for "see you later" as used in texting originated with telex operators exchanging informal messages in real time[citation needed] â€" they became the first "texters" long before the introduction of mobile phones[citation needed]. Telex users could send the same message to several places around the world at the same time, like email today, using the Western Union InfoMaster Computer. This involved transmitting the message via paper tape to the InfoMaster Computer dial code and specifying the destination addresses for the single text. Operation and applications[edit] This section does not cite any sources. Please help improve this section by adding citations to reliable sources. Unsourced material may be challenged and removed. June Learn how and when to remove this template message Telex messages are routed by addressing them to a telex address, e. Ericsson in Sweden and S is the country code. Solutions also exist for the automatic routing of messages to different telex terminals within a subscriber organization, by using different terminal identities, e. A major advantage of telex is that the receipt of the message by the recipient could be confirmed with a high degree of certainty by the " answerback ". At the beginning of the message, the sender would transmit a WRU Who aRe yoU code, and the recipient machine would automatically initiate a response which was usually encoded in a rotating drum with pegs, much like a music box. The position of the pegs sent an unambiguous identifying code to the sender, so the sender could verify connection to the correct recipient. The WRU code would also be sent at the end of the message, so a correct response would confirm that the connection had remained unbroken during the message transmission. This gave telex a major advantage over group 2 fax which had no inherent error-checking capability. The usual method of operation was that the message would be prepared off-line, using paper tape. All common telex machines incorporated a 5-hole paper-tape punch and reader. Once the paper tape had been prepared, the message could be transmitted in minimum time. Telex billing was always by connected duration, so minimizing the connected time saved money. However, it was also possible to connect in "real time", where the sender and the recipient could both type on the keyboard and these characters would be immediately printed on the distant machine. Telex could also be used as a rudimentary but functional carrier of information from one IT system to another, in effect a primitive forerunner of Electronic Data Interchange. The sending IT system would create an output e. The tape would be sent by telex and collected on a corresponding paper tape by the receiver and this tape could then be read into the receiving IT system. One use of telex circuits, in use until the widescale adoption of X. In addition to permitting email to be sent to telex, formal coding conventions adopted in the composition of telex messages enabled automatic routing of telexes to email recipients. It originally transmitted at TWX used the public switched telephone network. It published articles that touched upon many aspects of the technology. Any remaining "3-row" Baudot customers were converted to Western Union Telex service during the period to Bell Canada retained area code until ; its remaining numbers were moved to non-geographic area code The modem for this service was the Bell dataset, which is the direct ancestor of the Bell modem that launched computer time-sharing. The was revolutionary because it ran on ordinary unconditioned telephone subscriber lines, allowing the Bell

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Chapter 7 : INTERNATIONAL TELEX AND TRANSMISSION SERVICE, INC. / Liles Virginia

SwissTelex started its activity on 1st March as Swiss/international telex service provider. It uses the existing infrastructure of Swisscom, with the telex switch and offices being on Swisscom premises in Breganzona (near Lugano - Switzerland) and staff consisting of the former Swisscom telex team.

Save A Teletype Model 32 used for Telex service The telex network was a public switched network of teleprinters similar to a telephone network , for the purposes of sending text-based messages. Telex was a major method of sending written messages electronically between businesses in the post World War II period. Its usage went into decline as the fax machine grew in popularity in the s. The "telex" term refers to the network, not the teleprinters; point-to-point teleprinter systems had been in use long before telex exchanges were built in the s. Teleprinters evolved from telegraph systems, and, like the telegraph, they used binary signals , which means that symbols were represented by the presence or absence of a pre-defined level of electric current. This is significantly different from the analog telephone system, which used varying voltages to encode frequency information. For this reason, telex exchanges were entirely separate from the telephone system, with their own signalling standards, exchanges and system of "telex numbers" the counterpart of telephone numbers. Telex provided the first common medium for international record communications using standard signalling techniques and operating criteria as specified by the International Telecommunication Union. Customers on any telex exchange could deliver messages to any other, around the world. To lower line usage, telex messages were normally first encoded onto paper tape and then read into the line as quickly as possible. The system normally delivered information at 50 baud or approximately 66 words per minute, encoded using the International Telegraph Alphabet No. In the last days of the telex networks, end-user equipment was often replaced by modems and phone lines, reducing the telex network to what was effectively a directory service running on the phone network. Development A late-model British Telecom "Puma" telex machine of the s Telex began in Germany as a research and development program in that became an operational teleprinter service in The service, operated by the Reichspost Reich postal service [1] had a speed of 50 baud â€" approximately 66 words per minute. Telex service spread within Europe and particularly after around the world. Long before automatic telephony became available, most countries, even in central Africa and Asia , had at least a few high-frequency shortwave telex links. Often, government postal and telegraph services PTTs initiated these radio links. The cost of TOR equipment has continued to fall. Although the system initially required specialised equipment, as of many amateur radio operators operate TOR also known as RTTY with special software and inexpensive hardware to adapt computer sound cards to short-wave radios. Telex served as the forerunner of modern fax , email , and text messaging â€" both technically and stylistically. Abbreviated English like "CU L8R" for "see you later" as used in texting originated with telex operators exchanging informal messages in real time â€" they became the first "texters" long before the introduction of mobile phones. Telex users could send the same message to several places around the world at the same time, like email today, using the Western Union InfoMaster Computer. This involved transmitting the message via paper tape to the InfoMaster Computer dial code and specifying the destination addresses for the single text. Operation and applications Telex messages are routed by addressing them to a telex address, e. Ericsson in Sweden and S is the country code. Solutions also exist for the automatic routing of messages to different telex terminals within a subscriber organization, by using different terminal identities, e. A major advantage of telex is that the receipt of the message by the recipient could be confirmed with a high degree of certainty by the " answerback ". At the beginning of the message, the sender would transmit a WRU Who aRe yoU code, and the recipient machine would automatically initiate a response which was usually encoded in a rotating drum with pegs, much like a music box. The position of the pegs sent an unambiguous identifying code to the sender, so the sender could verify connection to the correct recipient. The WRU code would also be sent at the end of the message, so a correct response would confirm that the connection had remained unbroken during the message transmission. This gave telex a major advantage over group 2 fax which had no inherent error-checking capability. The usual method of operation was that the message would be prepared

off-line, using paper tape. All common telex machines incorporated a 5-hole paper-tape punch and reader. Once the paper tape had been prepared, the message could be transmitted in minimum time. Telex billing was always by connected duration, so minimizing the connected time saved money. However, it was also possible to connect in "real time", where the sender and the recipient could both type on the keyboard and these characters would be immediately printed on the distant machine. Telex could also be used as a rudimentary but functional carrier of information from one IT system to another, in effect a primitive forerunner of Electronic Data Interchange. The sending IT system would create an output e. The tape would be sent by telex and collected on a corresponding paper tape by the receiver and this tape could then be read into the receiving IT system. One use of telex circuits, in use until the widescale adoption of X. In addition to permitting email to be sent to telex, formal coding conventions adopted in the composition of telex messages enabled automatic routing of telexes to email recipients. It originally transmitted at TWX used the public switched telephone network. It published articles that touched upon many aspects of the technology. Any remaining "3-row" Baudot customers were converted to Western Union Telex service during the period to Bell Canada retained area code until ; its remaining numbers were moved to non-geographic area code The modem for this service was the Bell dataset, which is the direct ancestor of the Bell modem that launched computer time-sharing. The was revolutionary because it ran on ordinary unconditioned telephone subscriber lines, allowing the Bell System to run TWX along with POTS on a single public switched telephone network. International, in the summer of with limited service to London and Paris. Further, all Chicago-based customers had telex numbers that started with a first digit of "2". This numbering plan was maintained by Western Union as the telex exchanges proliferated to smaller cities in the United States. The Western Union Telex network was built on three levels of exchanges. Each of these cities had the dual capability of terminating telex customer lines and setting up trunk connections to multiple distant telex exchanges. The second level of exchanges, located in large cities such as Buffalo, Cleveland, Miami, Newark, Pittsburgh and Seattle, were similar to the highest level of exchanges in capability of terminating telex customer lines and setting up trunk connections. However, these second level exchanges had a smaller customer line capacity and only had trunk circuits connected to regional cities. The third level of exchanges, located in small to medium-sized cities, could terminate telex customer lines and had a single trunk group running to its parent exchange. Loop signaling was offered in two different configurations for Western Union Telex in the United States. The first option, sometimes called local or loop service , provided a 60 milliampere loop circuit from the exchange to the customer teleprinter. The second option, sometimes called long distance or polar was used when a 60 milliampere connection could not be achieved, provided a ground return polar circuit using 35 milliamperes on separate send and receive wires. By the s, under pressure from the Bell operating companies wanting to modernize their cable plant and lower the adjacent circuit noise that these telex circuits sometimes caused, Western Union migrated customers to a third option called F1F2. This F1F2 option replaced the DC voltage of the local and long distance options with modems at the exchange and subscriber ends of the telex circuit. USA based Telex users could send the same message to several places around the world at the same time, like email today, using the Western Union InfoMaster Computer. The result was a de-emphasis on telex in the U. In , it was purchased by MCI International. TRT eventually became the national carrier for many small Central American nations. Bell Telex users had to select which IRC to use, and then append the necessary routing digits. United Kingdom Telex began in the UK as an evolution from the s Telex Printergram service, appearing in on a limited basis. This used the telephone network in conjunction with a Teleprinter 7B and signalling equipment to send a message to another subscriber with a Teleprinter, or to the Central Telegraph Office. In as the traffic increased it was decided to have a separate network for Telex traffic and the first manual exchange opened in London. By , the public inland Telex service opened via manually switched exchanges. A number of subscribers were served via automatic sub-centres which used relays and Type 2 uniselectors , acting as concentrators for a manual exchange. In the late s the decision was made to convert to automatic switching and this was completed by ; there were 21 exchanges spread across the country, with one international exchange in London. The equipment used the Strowger system for switching, as was the case for the telephone network. User numbers increased over the following years into the s. A separate service "Secure

Stream " previously Circuit Switched Data Network was a variant of Telex running at baud, used for telemetry and monitoring purposes by utility companies and banks, among others. This was a high security virtual private wire system with a high degree of resilience through diversely routed dual-path network configurations. British Telecom stopped offering the Telex service to new customers in and discontinued the service in , allowing users to transfer to Swiss Telex if they wished to continue to use Telex. This service supplemented the existing international telex service that was put in place in November Canadian telex customers could connect with nineteen European countries in addition to eighteen Latin American, African, and trans-Pacific countries. Individual subscribers can use Deskmail, a legacy Windows program that connects to the iTelegram telex network but this is via IP as the last mile.

Chapter 8 : Telex Contact Information

International Telegrams are hand delivered to your recipient with detailed tracking information available, including signature. Telegrams are hand delivered to the destination by agents. Recommended if tracking and confirmation of telegram delivery is needed.

It remains a reliable communication tool with specific needs in Banking, Aviation and Maritime, although is still widely used in many secure environments including Embassies, Governments, Post Offices and Military organisations worldwide. The days of morse code transmitted across a copper wire and a pony express waiting to deliver the message have long gone, but its satellites offer secure, controlled and unique communication needs for demanding Industries. The internet today was based on many original telex functionalities for direct Inter-Country communication, desktop messaging and the Internet Chat type facility is the traditional telex "conversational" call. Billions of Dollars USD of financial transactions passes across the telex network every day ensuring its longevity for many years to come. Security is paramount and the global traditional telex satellites continue to offer excellent service. Once a telex is sent it is basically irrevocable once the receivers telex system has confirmed the receipt of the message. Telex lines carry their own unique encryption, making it relatively impossible to "hack" into a traditional telex line or telex machine. The cost of sending a telex message to a vessel in any Ocean is often far less cost than by fax or maritime email. A telegram is a telegraphically transmitted message. The sender types and submits a text based message that is instantly transmitted world wide and delivered to the receiver as a paper copy message. Nothing has more urgency than a telegram. As it is normally signed for by the receiver with the telegram itself being a message with legal document status. Proof of both sending and receipt are therefore assured with international transmission in seconds rather than days of the standard surface mail services. Traditionally telegrams are sometimes seen to be for special occasions and they indeed make a welcome surprise for the receiver. However due to the nature of a legal document, both local and International telegram services are widely used for legal notices, credit control and debt collection purposes. It is difficult to ignore a telegram message that has to be signed for with a waiting Network telex delivery driver and once signed for can be considered as "served". Its legal delivery assistance is therefore a major asset to the fast and efficient global telegram network today. The cell mobile phone industry has experience phenomenal growth worldwide; customers are seen to welcome a precise and specific notification that can be an advantage to their business or lifestyle. SMS has many uses for simple update messages to marketing, Competition and lifestyle awards. Rolls of Telex paper and all types of consumables are available from Network telex. Network telex delivers a wide range from vessels at sea, Airline check-in desks, financial institutions and even for the Fire service call out systems and the Fire engines Appliances themselves. Network telex will supply globally at low cost - contact sales telex-net. Please contact Network telex on support telex-net.

Chapter 9 : telex - Magazines

ITU-T-U The International Telex Service - Interworking With the Inmarsat C System Using one-St.