ANATOMY OF A WIRE STORY 11

An explanation of the new

NAA-IPTC-RTNDA International Guidelines

Submitted to

RTNDA Data Transmission Committee
San Antonio, Texas
Sept. 25, 1992

Submitted by

The Technical Subcommittee:
Jeff Field, Reuters (Chairperson)
Peter Doherty, ABC News
Sue Mosher, AP Broadcast Services
with
David Allen, Managing Director, IPTC

INTRODUCTION

This document is intended as a "plain English" explanation of the new wire transmission guidelines being developed jointly by the Newspaper Association of America (NAA)*, International Press Telecommunications Council (IPTC) and Radio-Television News Directors Association (RTNDA).

It is assumed that the reader is already familiar with current wire standards. The reader would also be well-served to read the original *"Anatomy of a Wire Story"* written for RTNDA in 1989.

* NAA was formed in June, 1992, as the successor to the American Newspaper Publishers Association (ANPA).

TABLE OF CONTENTS

PART I: THE CONCEPT

Information processing -- among the media, just as in other activities -- has not kept up with the growth in volume of available information.

Even on the 9600-baud circuits that represent the fastest text news wires currently available, the primary means of determining story content is still rather rudimentary. Existing standards allow for identifying national VS. international stories ... state/regional VS. national... sports vs. business ... separate stories vs. news summaries, etc. Any additional search tools largely depend on the type of full-text searches used by word processing programs. Topic-based, database-type text retrieval using real-time news copy is largely unavailable, except where a lot of preprocessing is done by the receiving organization's system.

This dilemma highlights the two primary reasons for developing a new transmission standard:

- The old standard was rigid and impossible to expand. It was simply not possible to add several new categories or introduce the concept of sub-categories.

- The new standard is optimized for computer systems. The old standard was not developed specifically for computer systems to receive stories. While it does help computer systems with the sorting of stories, it was also designed to be printed or "visible." A story moving under the new standard can also be printed out, but it will take a computer to do it.

Comparing the new standard with the old is like comparing an expensive sports car with a bicycle. It represents a quantum leap forward in exploiting digital transmission capabilities.

The new rules are based on a recognized international data standard known as the Open Systems Interconnection (OSI) model. The OSI model consists of seven layers of standards designed to deal with virtually every facet of data handling.

The first six layers encompass issues of interest to equipment manufacturers, telephone companies and the like. These layers, if adhered to, provide the means to transmit data to, from or among different types of computers over any modern communications facility.

The seventh layer of the OSI model deals with the content and subject matter of the data. This is the only part of the OSI model that the joint guidelines attempt to define. (The first six layers would be common to any data transmission, not just those of the world's news service providers.)

The new standard is also known as a model -- specifically the "Information Interchange Model." We will call it the IIM (pronounced eye-eye-em) from here on.

The official documentation for the IIM doesn't talk about stories or pictures, but rather data "objects." We will also use "objects" herein as a name for what is being sent. We will, however, continue to use the term "story," where appropriate, for the sake of understanding the IIM and comparing it with the old NAA-RTNDA standard.

The new standard is built on the concept that the data could be almost anything, not just text. In fact, the first implementations of the new standard are for the transmission of still pictures.

Each data object is wrapped in a comprehensive "envelope" that is thoroughly defined. This is one major improvement in the new model: Every part of a story is tagged in such a way that a computer can sort by it. Headlines, datelines, bylines, etc., can all be transmitted as different "datasets" that can easily be found by the computer.

What this means is that you can expect computer programs to do more of the sorting drudge work f or you and to do it more intelligently. It should be possible to link stories with pictures, and to link forward as well as backward when dealing with a breaking story. As users and programmers begin to study and understand the IIM, it is a virtual certainty that they will think of other clever uses for the capabilities provided. This document is intended as a stimulus to that effort.

The IIM comes "out-of-the-box" with many useful data fields not included in the old NAA-RTNDA standard. It allows a story to be described with more than one of some fields, such as multiple supplemental categories. The possibility for expansion is virtually unlimited; If some new method of identifying a story comes about, it can simply be incorporated into the IIM.

By its very structure, the IIM will insure that end-user computer systems have the same capability to add and change as news gathering needs change. The IIM theoretically even allows for the transmission of computer programs, so it may be possible for a wire service or your vendor to deliver software updates to you electronically.

The IIM even allows for the old NAA-RTNDA standard to be transmitted within it!

PART II: EXPLORING THE ENVELOPE

In keeping with the OSI approach, the IIM wraps the "object" in several layers or records, the whole rapper being known as the envelope. Within each record layer are datasets that thoroughly describe various aspects of the news item. The story (or picture) itself is a separate dataset.

As you read through this, you may find many of the datasets either unnecessary or repetitious. Remember that, unlike the existing NAA standard, the IIM is designed for computer processing, with room for future expansion. It does not dictate that all datasets be sent, only those required for the particular story.

At the same time, it's expected that receiving newsroom systems will not necessarily use every dataset. The IIM suggests that datasets not needed or desired for a particular application simply be ignored.

This document does not attempt to cover all datasets or to provide a precise technical explanation of each one. Those can be found in the complete published IIM document itself.

Five basic levels of records make up a data object or story:

1. Envelope Record -- Datasets describing the type of data (e.g. text, photo, etc.), when it was sent, by whom and to whom

2. Application Records -- Datasets with useful editorial and technical information (slugline, dateline, compression scheme, etc.) about an object

3. Pre-Object Descriptor Record -- Datasets providing information about the size of the object

4. Object Record -- The story, picture or audio cut itself

5. Post-Object Descriptor Record -- A single dataset providing the final, confirmed size of the object

The first level, the Envelope Record, includes a few datasets of use to newsroom system programmers:

A unique identifying number for each object (datasets 1:30 and 1:40)

Date and time sent (1:70 and 1:80)

It also contains several datasets which may be useful mainly to news services, with some limited utility for system developers:

File format and version, i.e. the type of data (datasets 1:20 and 1:22)

Destination and Product ID, datasets used by news agencies to define different services (1:05 and 1:50)

Envelope priority, a rating from 1 (highest) to 8 (lowest), which determines which items get sent first by a news service. This is not necessarily related to the urgency of its content (1:60)

Note that datasets 1:30 (Service Identifier), 1:40 (Envelope Number) and 1:70 (Transmission Date) provide a way of uniquely identifying each transmission.

The next record layer consists of the Application Records. This is where most of the new and/or better description of a story takes place. Included are such things as category, supplemental category (repeatable), keywords (repeatable), byline, dateline, headline, etc.

Datasets within this part of the IIM carry numbers that start between 2 and 6. Datasets in Record 2 are common to all types of news transmissions. Records 3-6 may contain information specific to a particular type of object. Keep in mind that most of these fields are not mandatory.

Object Name (Dataset 2:05): This field can be up to 64 characters long. While its name is new, it is really the same as the "slug" (keyword) field in the old standard, but expanded. Spaces between words are allowed, and the "cycle identifier" used on newspaper copy has been moved elsewhere, eliminating clutter.

Urgency (Dataset 2:10): This field is still one character long, but it is now numeric, abandoning the old "Flash," "Bulletin," "Urgent," "Rush" standard in favour of a number. This will allow a finer point to be put on the urgency of a story regardless of the language being used. Note that the IIM includes datasets for both the transmission priority and the urgency of the item's content, something that was impossible under the old standard.

One of the guiding precepts of the IIM was that it should carry information that assists the recipient in routing the information to various systems after it arrives. In order to provide efficient routing, it is necessary to specify which objects should be passed along ahead of other objects.

Two fundamental considerations are:

1. Which copy should arrive ahead of other copy for practical reasons? For example, editors might be holding financial pages from going to press until the final stock prices arrive or they are they are holding sports pages until some important event is over and the score and story arrives. Clearly, these news items need to be passed along in front of secondary or supplemental items that might used for later-closing pages or perhaps even the next day's newspaper. They are, however, scarcely of earth-shaking importance. This is **Envelope Priority 1:60**

2. What is the <u>significance</u> of the information contained in the object? Is it something warranting a TV station to break into its normal programming? Is it something so important that a newspaper will stop the presses to make over Page 1? Events of this magnitude are not hard to find, e.g., Sadat assassinated, Gulf war starts, etc. As one would expect, this is **Urgency (2:10)**

Naturally, it follows that a object of a high news **Urgency** will carry a high **Envelope Priority.** However, a high **Urgency** priority would be expected to set off alarms in newsrooms whereas a high **Envelope Priority** would not.

Category (Dataset 2:15): This field has been expanded from the current single alphabetic character under NAARTNDA to a maximum of three, in common use under IPTC. It is likely, however, that many news agencies will continue the current practice of using one character in the NAA-RTNDA implementation of the standard and three characters in the IPTC implementation.

Subject to agreement in North America, it may be possible to use the second character position for the RTNDA version of category codes where they differ from NAA. For example, NAA and RTNDA both use In' for state and regional news, but RTNDA also uses 'g' and 'j'. To indicate a local broadcast summary, the new standard might transmit both codes 'nj' in Dataset 2:15.

Supplemental Category (Dataset 2:20): This new field can be up to 32 characters long. Like many datasets in the new standard, it can be repeated -- meaning a story can have more than one supplemental category. It can include any of the categories in Dataset 2:15. It is anticipated this dataset might be used several ways:

- *as a subset of the category*

Example:	A	National League baseball story.
2:15 s	<-	sports
2:20 bbn	<-	National League baseball

- *as an expansion of the category*

Example: A general news story about science.
2:15 a <- domestic-datelined news
2:20 science

- *as a method of giving a story multiple categories*

Example:The rape trial of boxer Mike Tyson
2:15 a<- domestic-datelined news
2:20 s<- sports

- *as a method of indicating multiple subtopics*

Example:A story about a new automobile fuel that's less polluting.
2:15 a <- domestic-datelined news
2:20 transportation
2:20 environment

Keyword (Dataset 2:25): This new field can be up to 64 characters long and can be repeated. It is designed specifically for information retrieval. Ideally, most stories would have several keywords indicating subject matters of interest in the news item.

Together, the following fields could be used to give the user a detailed dateline.

- City (Dataset 2:90), up to 32 characters
- Province-State (Dataset 2:95), up to 32 characters
- Country Code (Dataset 2:100), 3 characters
- Country Name (Dataset 2:101), up to 64 characters:

- Headline (Dataset 2:105): This field can be up to 256 characters long and is designed to allow receiving systems to precisely locate the headline. There is no comparable field in today's wire transmission guidelines.

- Fixture Identifier (Dataset 2:22): Recurring items may each have their own distinguishing label, up to 32 characters, including spaces.

- Reference Service, Date and Number (Datasets 2:45, 2:47, 2:50): These fields together form an analogous method of referencing any previous transmission, whether of the same file format and from the same provider or in a different format and/or by a different provider.

Note that the basic unit is the transmission, not the object. A single object may be transmitted a second time, for example, if one or more clients did not receive the original transmission. In both transmissions, records 2-9 will contain the same information about the object, but record 1 will comprise information specific to the individual transmission.

The IIM would seem to allow for the same-day retransmission of an object with the same 1:30, 1:40 and 1:70, but with a different 1:80 (Time Sent) each time. However, this practice is discouraged. Instead, agencies are encouraged to assign each transmission its own unique envelope number.

Retransmissions provide one example of the potential use of the optional reference fields 2:45, 2:47 and 2:50. The retransmission can use these fields to reference the object as originally transmitted, an important reference if the retransmission occurred at a later date.

Applications designers are encouraged to accommodate a system of linked references, so that references to an object will be available to a user whose system did not receive the original transmission, but only a subsequent retransmission.

The link between an object and another object referenced by the first object's 2:45, 2:47 and 2:50 may be one of several forms. In practice, a comparison of the file formats of the two objects may provide an initial indicator of the implied type of link.

For example, two objects of the same file format and different services may be linked for different reasons than two digital newsphoto objects from the same agency.

An instance of the first case might be a television video provider transmitting a script that references one (or more) news wire stories from various agencies. Both the script and the wire stories are text, but from different providers. In the second instance -- two digital newsphotos from the same agency -- a thumbnail image might be linked to one or more separations from a single color project.

Note that these references are, of necessity, one-way, in that the reference is always to an object previously transmitted.

In practice, users can be expected to be interested in links in both directions, since they may be indifferent to the sequence in which objects are received. Applications designers ought to consider the issue of displaying links between objects, perhaps in an index of items of different file formats. This index might initially show items linked directly, i.e., by a single reference to and/or from the object(s) that comprise a starting point. An expanded look at the index might include the set of items removed by one reference level, i.e. those with references to or from the set of items linked directly.

Other Record 2 datasets, such as caption, may not be useful to text, but will be relevant to photos, graphics and audio.

Application Record **3** is intended to cover datasets required to describe a particular type of data (Records 4-6 are not in use yet for any IPTC-registered file format) . For digital newsphotos, which is the first full implementation of the IIM, the Record 3 datasets include:

- Pixels per line
- Color calibration matrix table
- Scanning direction
- Data compression method

While a text Application Record 3 is not yet developed, it's easy to envisage a variety of useful datasets:

Text/tabular/mixed: Does the item consist solely of text in paragraphs, text not formatted as paragraphs, data in columns, or a mixture of different formats?

Expiration date/time: While Record 2 contains datasets for release date and time, expiration may also be useful, especially in the case of perishable weather information.

Digital audio transmissions under the IIM would need a different Application Record 3. More technical fields for audio will likely be analogous to those in the digital news photo Record **3,** such as sampling rate and compression method.

Other audio datasets with potential newsroom applications might include:

Run time: Length of the audio cut

Outcue: Final words or other indication of the end of the cut

Speaker: Perhaps a repeatable field including the name of each voice or sound heard in the cut

Pre- and Post-Object Descriptor Records 7 and 9 include information about the size of the object.

Object Record 8 is the news item itself. It actually may be sent as multiple subfiles reassembled on the receiving end into a single object.

PART III: PARTICULAR TEXT ISSUES

Most subscribers to news services receive the bulk of their information in the form of text. Because not every end-user sees it in the same way, text presents some unique problems (and opportunities).

A picture is always a picture and sound is sound. A news story or stocks table, however, presents a different appearance depending on whether it's viewed as printed copy, displayed on a computer screen (at various resolutions) or incorporated into a newspaper page layout.

The ideal solution is to transmit text in a form that is "device independent," leaving it to the receiving printer or system to interpret it in the manner appropriate f or each particular user. In practical terms, this means separating the content and the structure of the story.

Desktop publishing and inter-office message and document exchange have produced several potential solutions. Among them are Interchange Postscript, Open Document Architecture and DEC's Compound Document Architecture.

one of the leading contenders for handling news text under the IIM is SGML, or Standard Generalized Markup Language. SGML is actually more of a language-creation tool, since it allows the development of different types of descriptive structures for different applications.

Current users include the U.S. Department of Defense, for its Computer-aided Acquisition and Logistics Support (CALS) strategy, which requires defense contractors to produce technical documentation in an SGML format. SGML was also used to compile the new Oxford English Dictionary. The Air Transport Association, the American Association of Publishers, Rolls Royce and British Aerospace have other SGML applications.

What are some of the particular problems that SGML might resolve? Take, for instance, tabular material. It is virtually impossible in the current NAA-RTNDA standard to send tables (sports standings, stock lists, etc.) that line up as well on computer screens as on printers -- and still look good in the newspaper. SGML could attack this problem by defining an area of tabular data as a particular type of table -- so many columns, some right justified, some left justified -- and let the receiver decide what to do with it.

Another difficulty that might be solved with SGML involves television news scripts. Since networks transmit scripts to their affiliates as straight ASCII text, often laid out in columns, there's no easy way for a newsroom computer system to extract character generator information or to incorporate a package's script into the stream being sent to a closed captioning encoder. A consistent way of tagging CG and other elements of a news script would allow each receiving system to interpret and process it according to its own rules.

PART IV: COMPOUND DATA TYPES

In the early days of wire delivery, service providers had a separate transmission system for each type of service.

There were separate circuits for morning newspapers and for afternoon papers. There were separate state and regional circuits. There were multiple separate "split" circuits delivering a combination of world, national and regional information to newspapers, radio and television stations. There were separate circuits for sports, for business news, for stock market data, for audio reports, and for pictures.

Filmed news footage was routinely delivered as small package air freight aboard commercial airline flights. Wire advisories were sent alerting stations to the airline's ETA in their city.

Over the past few decades, news agencies have taken advantage of technology to multiplex several services on a single transmission circuit or satellite channel. As the technology improved, they also implemented faster and faster speeds of transmission.

Inevitably, news agencies will want to transmit objects that incorporate more than one data type -- an entire newspaper page layout with editable text and graphics. Or maybe a radio news script with text and imbedded audio.

The IIM allows differing data types. Also, file formats established within other segments of the communications and computer industries can be registered with IPTC and wrapped in the standard IIM envelope.

SGML, if chosen for as the method of text representation, allows non-text to be referenced from within a text document.

As desktop publishing and multimedia efforts converge, new ways of moving information among diverse applications are likely to emerge. These may provide a foundation for news transmissions in the not-so-distant future.

PART V: TECHNICAL NUTS & BOLTS

Digital Transmission

It is helpful in considering the new IIM to understand the basic concept of digital transmission of data. Many different types of information can be sent using this method, not just text.

Virtually all of the long distance telephone calls in the United States are now transmitted digitally. The wire stories we receive today are transmitted as digital signals.

In a digital system, the information -- be it text, sound or picture -- is broken down into small pieces of information. The pieces are grouped together to form bytes or octets.

Each byte is made up of a combination of "l"s and "0"s, each known as a bit. The "l"s and "0"s are actually electrical impulses, and can be thought of as 'on' and 'off' signals (with a one representing 'on' and a zero representing 'off').

Since any digital system depends only on recognizing whether a signal is a "1" or a "0", it doesn't matter how strong or clear the signal arrives. It only has to be clean enough to make out the difference between an 'on' bit and a 'off' bit.

A group of eight bits forms a byte or octet. A byte can be a letter or a number or a control character.

The final product is not generated directly from the signal itself but is, instead, reconstructed at the receiving end by translating what the "l"s and "0"s represent back into the bytes of data, and then into the item (or "object") itself.

Transmission & Receiving Systems

The documentation for the IIM doesn't use the word story because it may not be a text transmission. In fact, it is likely that the wire services will use one very high speed data "pipeline" to send text, still pictures and, perhaps, audio. Even video is not out of the question, given some of the recent advances in compression technology.

By very high speed, we mean at least 9600 baud, and speeds of 56 kilobits or 1.5 megabits per second are not unlikely. All of this begs the question: What will connect to the computer in my newsroom?

The IIM does not directly address this issue, but the IPTC has recognized that the "broadcast" method of transmitting text news wires (one transmitter to many receivers, with no forward error correction) may not be adequate for the very high speed transmissions required for digital photos, graphics, audio and video. Some handshaking between news agenciest receivers and end user system is required.

To that end, the IPTC has recognized two transmission protocols. Others that may be added later must, at minimum, be in the public domain and consist of a published document and test program to allow developers to ensure conformance.

The two methods in use are the modified handshake protocol (MHP), developed by The Associated Press, and DIT-3, developed by Agence France Presse. MHP uses a highspeed local connection on the

GPIB bus, following the IEEE 488 standard. DIT-3 is a serial RS-232 connection. Both provide handshaking between the end user system and the news agency receiver.

For text-only transmissions, chances are that the high speed data will be sent as a synchronous signal to the newsroom. It's possible that wire services will provide a "black box" that can make the data "backwards compatible" to the NAARTNDA standard. That data would likely be an asynchronous ASCII signal, which would work for most newsroom systems without tremendous hardware modifications or investments. However, as vendors begin to introduce systems that can directly handle the new standard, they should consider implementing synchronous connections to the end user.

Depending on how each wire service chooses to implement the model, there may be several connections from the receiver box to various devices such as a newsroom text computer, a still photo or graphics generator and Digital Audio Broadcasting (DAB) devices. It may turn out that the receiver is, in fact, a computer that applies the IIM standard to the data it receives and then sends the output to the appropriate device.

Dataset Tags and Datasets

Each dataset is made up of two parts: a unique dataset "tag" and then the actual data. For example, when it-'s time to send the category code, a tag is sent that announces "Here comes the category code" and then the category code itself is sent. The tag is sent in a fashion that is easy for computers to interpret, but is not in printable ASCII characters. The category code, on the other hand, is 1-3 alphabetic characters.

As mentioned, the understanding of "bits" and "bytes" (or "octets") is one key to understanding how the new model works. This is because the binary representation of a byte/octet is used in dataset tags rather than actual printable characters.

A byte or octet is made up of 8 bits, a mixture of "l"s and "0"s. Normally, you would think of each octet as representing an ASCII character such as the letter "a"; but it is also possible to calculate an octet's binary number or its decimal equivalent and tell a computer program to use that interpretation of the octet instead.

How you determine the binary number of an octet is based on where the "l"s are located within the 8 bits that make up the octet. From right to left, each position represents an increase in value when a "1" is found in that position. The increase is in multiples of 2 known as "powers". A "l" in the left-most position of a byte or octet has a value of 1 X 2 to the seventh power (1 x 2 x 2 x 2 x 2 x 2 x 2 x 2) which, when the arithmetic is done, equals 128. A "1" in the fifth position from the right would have a value of 16 (1 x 2 x 2 x 2 x 2). If they were the only "l"s in the octet, they would have a combined value of 144 (128 plus 16) , and the octet (byte) would look like this: 10010000. You will see this spelled out in section 2:19 of the IIM's documentation where an octet is defined: The "1" in the left-most position is known as the "most significant" bit, and the "0" in the right hand position is known as the "least significant" bit.

The IIM identifies dataset tags with the record number, followed by a colon, followed by the dataset number. Be aware that a tag will not be transmitted that way. For example, dataset ID

2:15 would not be sent as you just read it, but rather as two octets, 00000010 (representing 2) and 00001111 (representing 15).

There are two different types of datasets: standard and extended. The difference is that a standard datasets length is equal to or less than 32,767 octets and an extended dataset has no maximum length. The tag for these two datasets differs also.

A standard datasets tag consists of 5 octets:

- tag marker: always the ASCII non-printing character known as a File Separator (FS) (decimal code 28, hex code 1C, octal code 034)
- record number
- dataset number
- two octets that represent the number of octets that follow in the actual data

The correct binary representation of the dataset tag for dataset 2:15, the category code, would be:

00011100 00000010 00001111 00000000 00000011

- The first octet is the binary representation for the FS character.
- The second octet is the binary representation for 2.
- The third octet is the binary representation for 15.
- The fourth octet is the binary representation for 0.
- The fifth octet is the binary representation for 3.

Since the FS octet could also be included as part of a transmission (a binary value in a digital video or audio transmission for example) , a computer program cannot simply look for 00011100 and decide that it has found a tag marker. It must keep track of the byte or octet counts for each dataset, and then look for the FS character that should be the next byte once the proper number of bytes for the dataset has passed.

This is not as tough as it might seem, because of the requirement that each and every dataset tag tell the computer how many bytes follow.

Once a tag marker has been found, the computer program would then know to look at the next two octets to determine the particular dataset tag, in this case 2:15. The last two octets tell the program that the data for this tag will be three octets long (and, of course, that another tag maker should be found after those three octets).

An extended dataset tag is the same as a standard dataset tag for the first three octets. Octets four and five are used to tell the number of octets that will be needed to indicate long the data octet count field will be. The data octet count starts at octet six and theoretically has no limit (since the data field itself has no limit), but you will know by this point how many octets it will take to tell you how many octets are in the actual data field. Practicality dictates that this will not be an open-ended situation but there is

no practice yet to rely on for guidance. The use of the extended dataset is not deemed likely in the near future. It was added to the standard simply as a means to deal with larger sizes in the future.

Fortunately, the computer reading the wire input should work all this out for you. What is important is that this very significant information will not be directly readable on a printer the way it is today. Instead, this delivery method is optimized for a computer. In fact, throughout the documentation for the IIM you will see indications of whether the data in a field is made up of "graphic characters" (something you could see on a printer) versus a binary number (which the computer would interpret).

The data belonging to each dataset immediately follows the dataset tag and can consist of graphic characters including spaces, or can be binary representations of information.

Some datasets are mandatory, most are optional. Some of each can be repeated. There is no limit on the number of repeats. Practically speaking, however, the limit would be the ability and time constraints of the wire service writer to generate the information in the first place. This is not a situation that newsroom system programmers need to fear. Nature will take its course in limiting the repeatable fields.

PART VI: AN EXAMPLE

The following story from the AP A-wire is presented as an example of how a story could look when transmitted in the IIM.

As mentioned previously, no internal text standard has yet been adopted. For this example, we are merely inserting the story text as it would appear today -- without the nonprinting codes.

The major difference is the variety and amount of detail in the "envelope" around the story.

First, how it appeared as it moved on the wire:

<SYN>
<SYN>
<SOH>
aO544<TFI> ----- <LF>
r w<DC3><DC1> PM-Sununu-Travel lstLd-Writethru aO423 04-24 0734 <CR><LF><STX>-PM-Sununu-Travel, 1st Ld-Writethru, aO423,800< ^Sununu Used Government Planes for Dentist's Visits< ^EDs: INSERTS new grafs 5-7, Asked today... to UPDATE with Sununu-Fitzwater comment; picks up 5th graf pvs, It is... < ^By TERENCE HUNT=
^AP White House Correspondent=
WASHINGTON (AP) - White House Chief of Staff John Sununu, under fire for his extensive use of government planes, twice flew to Boston for dental appointments on a military jet costing $3,945 an hour to operate.
Sununu also got a hop on a military plane to visit his parents in Florida and again to attend a New Jersey football game and farewell party for outgoing Gov. Tom Kean.
Trying to quell the flap over Sununu's travels, the White House released documents Tuesday itemizing 77 trips by Sununu from the spring of 1989 until last weekend.
etc. etc. etc. etc. etc.
etc. etc. etc. etc. etc.
In addition to the $47,044 in payments to the government, the document said Sununu was being billed for $20,831 in political costs that have not been reimbursed yet. It said $4,700 already paid was billed incorrectly and should have been listed as an official trip.<ETX>

AP-NY04-24-91 1134EDT<-<EOT>

Now, how it could appear in the future:

<FS>1:00 1
<FS>1:05 -----
<FS>1:20 10
<FS>1:22 01
<FS>1:30 APa
<FS>1:40 00000544
<FS>1:50 datastream
<FS>1:60 3
<FS>1:70 19910424
<FS>1:80 113400-0500
<FS>2:05 Sununu Travel

<FS>2:07 lstld Writethru
<FS>2:10 4
<FS>2:15 w
<FS>2:20 White House
<FS>2:25 Sununu
<FS>2:25 travel
<FS>2:25 Republican Party
<FS>2:25 White House
<FS>2:25 Congress
<FS>2:25 politics
<FS>2:45 APa
<FS>2:47 19910424
<FS>2:50 00000423
<FS>2:55 19910424
<FS>2:60 112600-0500
<FS>2:75 p
<FS>2:80 TERENCE HUNT
<FS>2:85 AP White House Correspondent
<FS>2:90 Washington
<FS>2:95 DC
<FS>2:100 USA
<FS>2:101 United States of America <FS>2:105 Sununu Used Government Planes for Dentist's Visits <FS>7:10 1
<FS>7:20 4404
<FS>7:90 4404
<FS>8:10 <SYN>
<SYN>
<SOH>
aO544<TFI> ----- <LF>
r w<DC3><DC1> PM-Sununu-Travel lstLd-Writethru aO423 04-24 0734 <CR><LF><STX>-PM-Sununu-Travel, 1st Ld-Writethru, aO423,800< ^Sununu Used Government Planes for Dentist's Visits< ^EDs: INSERTS new grafs 5-7, Asked today... to UPDATE with Sununu-Fitzwater comment; picks up 5th graf pvs, It is... < ^By TERENCE HUNT=
^AP White House Correspondent=
WASHINGTON (AP) - White House Chief of Staff John Sununu, under fire for his extensive use of government planes, twice flew to Boston for dental appointments on a military jet costing $3,945 an hour to operate.

Sununu also got a hop on a military plane to visit his parents in Florida and again to attend a New Jersey football game and farewell party for outgoing Gov. Tom Kean.

Trying to quell the flap over Sununu's travels, the White House released documents Tuesday itemizing 77 trips by Sununu from the spring of 1989 until last weekend.

etc. etc. etc. etc. etc.

etc. etc. etc. etc. etc.

In addition to the $47,044 in payments to the government, the document said Sununu was being billed for $20,831 in political costs that have not been reimbursed yet. It said $4,700 already paid was billed incorrectly and should have been listed as an official trip.<ETX>

AP-NY04-24-91 1134EDT<-<EOT>
<FS>9:10 4404

Other Application Notes

While the records must be transmitted in order, in most cases, the datasets within each record are not required to be sent in sequence.

A major exception is Dataset 8:10, Subfile. This is the data object itself. If it is broken into chunks for ease of transmission, those chunks must be sent in order.

ISO Standards Embodied in the IIM

Any attempt at developing an international standard must rely on existing standards. The IIM incorporates by reference the following ISO and other standards:

ISO 31-1	International System of Units
ISO 639	Codes for the representation of names of languages
ISO 646	7-bit coded character set for information interchange
ISO 2022	7-bit and 8-bit coded character sets, code extension techniques
ISO 3166	Codes for the representation of names of countries
ISO 4873	8-bit code for information interchange, structure and rules for implementation
ISO 7498	Open Systems Interconnection Model
ISO 8601	Formats for expressing time and date
ISO 8879	Standard Generalized Markup Language

IIM Documentation

Copies of IIM material are available from IPTC and NAA, as follows:

Newspaper Association of America
The Newspaper Center
11600 Sunrise Valley Drive
Reston, VA 22091
USA

Telephone: 1 703 648-1000
Fax: 648-1333

International Press Telecommunications Council
8 Sheet Street
WINDSOR, Berkshire
SL4 1BG
UNITED KINGDOM

Telephone: 44 1753 833728
Fax: 833750

RTNDA Documentation

Copies of RTNDA material are available from:

Radio-Television News Directors Association
1000 Connecticut Avenue, NW, Suite 615
Washington, DC 20036

Telephone: 1 202 659-6510
Fax: 223-4007