Recommended Implementation Practices for SPEEDE (RIPS)

To Be Used With SPEEDE/EXPRESS TS130 Implementation Guide
Available on the Postsecondary Electronic Standards Council (PESC)
website at www.PESC.org

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Chapter I - Introduction and Acknowledgments

This document was written initially by Dave Stones, a founding member of the American Association of Collegiate Registrars and Admissions Officers (AACRAO) committee on the Standardization of Postsecondary Education Electronic Data Exchange (SPEEDE). Dave Stones retired from the University of Texas at Austin in the year 2000 and is currently the University Registrar at Southwestern University in Georgetown, Texas.

The document was modified by the Texas Association of Collegiate Registrars and Admissions Officers (TACRAO) Ad Hoc Committee on Technology as well as others. It was then amended, based on a discussion November 2, 1997, at the Texas SPEEDE Users Group meeting in Fort Worth.

The latest modification to the original document was made by the AACRAO SPEEDE committee in April 2001.

This document is intended to be used in conjunction with the Implementation Guide to the Transcript Transaction Set Suite (ANSI ASC X12 Transaction Sets 130, 131, 146, and 147) created by the SPEEDE and ExPRESS (EXchange of Permanent Records Electronically for Students and Schools) committees. These transaction sets may be downloaded from the PESC web site at www.PESC.org.

The SPEEDE and ExPRESS committees developed the transcript standards to allow a maximum amount of flexibility in the way an institution can choose to send student academic and demographic information to other academic institutions, agencies and employers who participate in electronic data exchange. It was never intended for any one college or university to send all of the information included in the transcript transaction sets. In fact, in several cases, the same information can be sent in several ways in different segments. In many cases, certain segments and data elements are included only for the use of K-12 schools and should never be included in the postsecondary transcript.

The document is intended to be a guide to assist an institution in determining which information *must be included* in the SPEEDE transcript, which information is *strongly recommended to be included* to serve our students and assist the recipients of the data, and which information *may be included* whenever the sending institution feels it might be of value to the recipient. Since it would be impractical for most institutions to send different versions of the transcript to different recipients, most institutions will choose to send all information that might be desired by all the different recipients (other colleges and universities, state and federal agencies, admissions agencies such as AMCAS, LSAS, etc., high schools for feedback purposes, and employers).

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Chapter II - What Data to Include

This chapter deals with which information to include in the electronic transcript. To begin, it might be very helpful if you could look at your current printed transcript and make a list of all of the items ever included there.

A. What is a College Transcript? What makes it complete?

What do you include on your paper transcripts? Would you purposely omit an item on the electronic transcript that you considered important on the paper one? Would your students benefit from your inclusion of additional items on electronic transcripts sent to other schools? Will you want to send electronic transcripts just to other schools? (The Texas Board of Accountancy has expressed interest in electronic receipt for students taking the CPA exam.) What would you want to exclude?

Upon receipt, the other institution will usually need to mark receipt of the transcript, calculate meaningful GPA's, and evaluate transferability and equivalence of courses. In some circumstances, graduate advisors and scholarship committees will wish to print the full transcripts and look for special qualities of your student, which might include activities and honors. You need to serve both functions when you prepare your electronic transcript. That said, by no means do you need to feel compelled to send all items allowed by the SPEEDE format. In most cases, the information included on your paper transcript will suffice nicely.

B. Data Elements Required, Needed, or Recommended for ANSI ASC X12 Compliance in the SPEEDE Transcript (Transaction Set 130) in X12 Chronology and Terminology.

Among other things, this section should explain most of what might be received on an electronic SPEEDE transcript. You should have a copy of the SPEEDE/EXPRESS Implementation Guide.

The SPEEDE/ExPRESS format was designed to be robust, allowing schools to send any information needed on their regular transcripts, as well as in the transfer of student records to other school districts or to state education agencies. It is very flexible, but you will use only a small portion of that capacity.

Note that some data elements required by ANSI ASC X12 are required for technical reasons. These are to make the format unambiguous, rather than to serve the business function of carrying transcript data. The fact that the same transaction set (format) serves both postsecondary and Kindergarten through 12th grade causes many truly necessary postsecondary items to not be required for the format (as

would be enforced by syntax checkers), and the same for K-12 items. However, conventions may be mutually adopted by a group of users.

Note that items such as the "ST01" below are SPEEDE data elements.

1. REQUIRED BY ANSI ASC X12 for TS130

a. **ST segment.** Starting segment for every transaction set, including a single TS130 transcript (which will be terminated with an SE segment). This segment is required by ANSI ASC X12, but contains no information found on a printed transcript, except perhaps the fact that it is a transcript.

Some of the more interesting (relevant) data elements are:

ST01 Transaction set identifier ('130' for student educational transcript, '131' for acknowledgment)

ST02 Sender-generated control number, which will be checked against SE02 to be sure the transmission was accurate and complete

b. **BGN segment.** (Beginning Segment, following Start). Also required, and contains mainly housekeeping data, such as dates, plus reference numbers for later identification of this document.

BGN01 Transaction set purpose code ('00' for original transmission - use this as a default, '05' to replace a transcript sent earlier, '15' for re-submission, '18' for re-issue

BGN02 Reference number for transcript. Some schools use the YYDDD date, followed by a sequence number for that date.

BGN03 Today's date expressed as CCYYMMDD. This was changed in version 4010 from MMDDYY.

BGN04 Time

BGN05 Time code: ('CT' for Central Time, 'ET' for Eastern Time, 'MT' for Mountain Time, 'PT' for Pacific Time)

BGN06-09 Rarely used for SPEEDE.

c. **ERP segment** (Educational Record Purpose).

ERP01 'PS' for postsecondary transcript, 'DP' for a PreK-12 district transcript sent to a postsecondary institution.

ERP02 Status reason code. 'B48' sent at request of student, 'B49' record sent to replace earlier one, 'B50' requested record being sent.

ERP03 Action code. Used in TS146 (request for transcript) - not here.

d. **REF segment** - (Reference numbers for the individual for whom the transcript is issued). One or more numbers, along with their code set qualifiers. SSN would generally be carried in one of these segments.

REF01 Reference number qualifier: '50' for a state Student ID, 'LR' for a local Student ID, 'SY' Social Security number.

REF02 Student number itself.

REF03 Up to 80 character Description. Use this ***only*** if number system requires explanation.

REF04 Not used.

e. **N1 Segments**. Two separate N1 segments (internal to transcript) to identify sender and recipient of transcript. The sender N1 segment is generally sent before the N1 for the recipient. Either can also have N2, N3, N4, and/or PER following to provide additional information, but these are rare with SPEEDE transcripts, with the possible exception of the PER, which can indicate the person or department that is to receive the transcript, if different from the usual (admissions office).

These use FICE or other, more comprehensive code sets, in addition to text. A cross-walk is now available from the Postsecondary Electronic Standards Council (PESC) for 6 common taxonomies (FICE, IPEDS UNITID, ATP, ACT and Canada's CANSTAT 2 taxonomies).

N101 Entity identifier code. 'AS' (AACRAO Sender) indicates that the institution identified is the sender of a postsecondary transcript. 'AT' signifies the recipient of a postsecondary transcript.

N102 35 character textual name of the institution. This is optional, and probably redundant, but strongly recommended.

N103 Code qualifier for institution. Most common examples are '71' for IPEDS Unit I.D., '72' for ATP (College Board's Admissions Testing Program, codes maintained by ETS), '73' for FICE. '74 for American College Testing program (ACT).

N104 Institution code from the taxonomy indicated in N103. The ATP code for colleges is 4 digits, whereas FICE is 6. Georgia State University would have an ATP of 2851, and a FICE of 001574. In the case of Dallas Community College District, one would expect DCCD to be identified in the ISA segment (see section II. E), with the El Centro campus identified in the N1.

N105 and N106 Not used.

Some programmer/analysts who handle SPEEDE transcripts have expressed a preference to receive a PER segment in the N1 loop for the sender, specifying name of administrative contact, and RG=registrar, EM=electronic mail address, and TE=telephone number. This information would not vary from transcript to transcript. Similarly, the use of a PER segment in the N1 loop for the recipient allows addition of routing information and specification of the target office.

f. **IN1 and IN2 segments** to identify the types, formats, and components of the name of the student for whom the transcript is issued. IN1 provides the type of individual being named, and one or more IN2 segments carry the name itself, or parts of the name.

IN101 '1' for person.

IN102 Name type = '01' for given name, '02' for current legal name, '04' for name of record, '05' for previous name.

IN103 'S2' for student.

IN104 Not Used in Postsecondary Transcript

IN105 Not Used in Postsecondary Transcript

IN201 Name component qualifier. '01 for prefix, '02' for first name, '03 middle name, '04' second middle name, '05' last name, '06' first initial, '07' first middle initial, '08' second middle initial, '09' suffix, '16' composite (last, comma, first, etc..). We really recommend the use of components.

IN202 Value of the name part specified in IN201.

We recommend breaking the name into distinct parts.

If you carry them in your student data base, including any former names of the student is a good idea. It is done with a separate IN1 loop, and uses IN102='05' to separate that from the name of record. Please do not include an additional IN2 segment with IN201='15' (also maiden or former name) in the IN1 loop for name of record.

Sending upper/lower case is okay in the text part of the name. Recipients with upper case only, need to watch for this and convert to upper case before storing or using for matching.

g. **SE trailer segment** for the transcript.

SE01 Total number of segments in the transcript, including this one.

SE02 Transaction set control number, must agree with ST02.

2. REQUIRED by COMMON SENSE for USE as a TRANSCRIPT

That's all X12 requires, but a transcript without courses and sessions/terms would be meaningless, so let's add without objection:

a. **PCL records** showing other colleges attended.

PCL01 Code qualifier, as in N103.

PCL02 Code for other institution attended, from code set specified in PCL01.

PCL03 Attendance date range format specification. 'RD2' for a format allowing a range of years such as 92-96, 'RD4' for a year range such as 1992-1996, 'RD6' for a format allowing 960118-970930.

PCL04 Date range attended, in format specified above.

PCL05 Three digit code for level of highest degree received. Examples are '2.3' for associate, '2.4' for baccalaureate, '2.5' for baccalaureate honors, '4.2' masters, '4.4' doctorate.

PCL06 The year highest degree awarded, in CCYY format, e.g., 1997.

PCL07 Text name of institution. This is highly recommended to aid in start-up testing and in printing test transcripts.

b. **SST Segment** showing college scholastic status and high school data.

SST01 Three digit code for final status of Pre-K through 12th grade. Most colleges will omit this, as well as SST02 and SST03.

SST04 Current scholastic status at college issuing transcript. 'B27' for eligible to return or continue, 'B28' for suspension or dismissal, 'B51' for suspension or dismissal, but eligible to appeal for readmission.

SST05 Qualifier for date eligible to return if student is not in good standing. 'CM' for date in CCYYMM format.

SST06 Date eligible to return (if suspended or dismissed)

SST07 Current enrollment status. 'B30' for student currently enrolled, but courses in progress excluded from transcript, 'B31' for not currently enrolled, 'B34' for enrolled, with current courses included.

SST09 Optional 'Y', 'N', or 'U' (unavailable) for students paying in-state residency status.

Note: An N1 segment can follow the SST to identify high school attended.

c. At least one **SUM (Summary) segment** to show overall academic summaries (credit hours and GPA) should be included. This is referenced in the TS131 acknowledgment, so really must be included. Most schools will also choose to include SUM records for each session attended. If a school computes graduate and undergraduate summaries separately, then two overall SUM records might be used.

SUM01 A single character for credit type, typically 'S' for semester hours, 'Q' for quarter hours, or 'C' for continuing education.

SUM02 Course or grade level for the student. Use 'G' for graduate level work, 'U' for undergrad.

SUM03 Use 'Y' because the overall summary is cumulative.

SUM04 Number of credit hours used to compute the GPA. Real number, with decimal inserted if needed to carry a non-integer value.

SUM05 Number of credit hours that appear on the transcript. This would include all credits in SUM04 plus others not included there, such as withdrawal type grades and credits earned but not computed in GPA, such as CLEP.

SUM06 Credit hours earned.

SUM07 This is the minimum number of grade points assigned to the lowest grade used at the institution. For example, if this is a grade of 'F' and you assign zero grade points for an 'F', this value is '0'.

SUM08 This is the maximum number of grade points assigned to the highest grade used at the institution. For example, if this is a grade of 'A' and you assign 4 grade points for an 'A', this value is '4'.

SUM09 GPA, with decimal included if needed.

SUM10 Use a 'Y' if it is possible to have a higher grade point average than is sent in SUM08.

SUM17 The number of grade (or quality) points used to compute the GPA.. SUM17/SUM04 = SUM09. See the note at the end of Chapter IV, Section A about the TS131 Acknowledgment.

d. **LX segment** which adds nothing. However, a separator is needed by X12 to guarantee unambiguity of notes and other segments.

e. An **SES (Session) segment** to label and summarize each session/semester the student attended.

SES01 Starting CCYYMM of the semester, quarter, or term. For example, the spring semester of '97 would be represented by '199701' if it started in January.

SES02 Count for sessions with identical start months. This is a one-digit integer, generally 1. It could be two to represent concurrent work taken elsewhere, including correspondence work completed during the same term, or work taken from

another consortium partner. We strongly recommend that transfer work taken concurrently with work taken at the sending institution be sent in a separate SES loop, rather than using an N1 override in a single SES loop.

SES03 This is not used in the postsecondary transcript.

SES04 Type of session. Use '2' for semester, '3' for trimester, '4' for quarter.

SES05 Not required, but if you choose to send it, it would be the title of your term or session such as 'Spring Term 1997'.

SES06 through SES09 - Helpful to send the starting and ending dates of the term if you have them available.

SES11 Not required, but of interest for research purposes. A code qualifier for CIP or HEGIS might be included for the major area of the student.

SES12 The actual CIP or HEGIS code for the major. Optional, but SES11 and SES12 must either both be included or both omitted.

SES14 Scholastic status at the end of the semester. If you normally include this on your paper transcript, you could include this data element. Use 'B40' for suspended, 'B35' for highest honors such as Dean's List or President's List.

f. A **CRS (Course) record** for each course taken at the issuing institution. Special (or transfer - if you transcript them) courses may have an immediately following CSU segment for supplementary info.

CRS01 Basis for credit, generally 'R' for regular enrollment. 'I' for international baccalaureate, 'N' for correspondence, 'A' for College Board's AP credit, 'C' for CLEP, 'D' for DANTES.

CRS02 Type of credit. 'Q' for quarter hours, 'S' semester hours, 'N' no credit.

CRS03 Credit associated with course, in credit hours identified in CRS02.

CRS04 Credit hours earned for this course by the student (usually = CRS03 if student passed the course).

CRS05 Academic grade qualifier, as maintained by AMCAS. For instance, '25' means the institution awards grades of A, B, C, D, or F, and uses a standard 4-point scale. Special qualifiers in the 500 series cover non-standard grades such as 'in progress', 'withdrawal' and 'incomplete'.

CRS06 Actual grade.

CRS07 'Y' if honors credit was awarded for this course to this student.

CRS08 Academic level of the course. 'L' for lower division, 'H' for higher or upper division, 'U' for undergraduate, 'R' for remedial, 'G' for graduate.

CRS09 Repeat indicator. Use 'N' if the course was later repeated and this attempt is not included in the GPA or 'X' if the student was granted academic amnesty for this course and it is not included in the GPA.

CRS10 Qualifier for curriculum code. This may be used more later for analysis and reporting purposes.

CRS11 CIP or other academic code from taxonomy specified in CRS10. CIP codes were designed to be used for programs and not for courses so CRS10 and CRS11 are not included by many institutions.

CRS12 Grade or quality points earned. Please note that the format for this field changed from N2 (900 to represent 9.00, for example) in version 1 (August 1992 implementation guide) to R (9 or 9. for 9) in version 2 (May 1994) and thereafter.

CRS13 Not used by postsecondary schools.

CRS14 Department or course abbreviation for the course at the school issuing the transcript (equivalent course if transferred)

CRS15 Course number for course at issuing school. It is absolutely essential to include CRS14 and CRS15 or at least one of these.

CRS16 Title of the course. You may include up to 60 characters of the course title, although many institutions who receive the transcript will have to truncate the title if you send such a large title.

CRS20 Credit source. 'IA' for institutional agreement, 'TC' for transfer credit (follow with CSU segment).

g. A **CSU Segment** should be included for the course if the course number has changed at your school or if a transfer course was included in the CRS segment.

CSU01 Department abbreviation for course at original school for a transfer course, or the new abbreviation for your course if the course number has changed.

CSU02 Course number at school where course was taken or the new course number at your school if the course number changed from the one sent in the CRS segment.

h. A **DEG (Degree) record** for each degree earned at the issuing institution. It must be included in the SES loop for the session or term awarded. It can, but often does not, include a special SUM segment and a FOS segment for field or study specification. NTE segments for special honors or specializations are quite appropriate.

DEG01 3 character degree code. For instance, '2.3' for associate degree, '4.2' for master's (as with PCL05).

DEG02 Qualifier for date awarded. For example, 'D8' for CCYYMMDD, 'YM' for YYMM, 'CM' for CCYMM

DEG03 Date awarded, in format specified in DEG02.

DEG04 Degree title. This is text such as 'Bachelor of Science' .

DEG05 Honors level. 'B35' for highest honors, 'B36' second highest honors, 'B37' third highest honors.

i. **SUM Segment** at this point may be included in the degree loop if you have information about the student's degree you can send. If you have cumulative totals for this particular degree, this is the place to include them.

SUM02 'M' for work in major or program, if summaries are carried for this.

j. **FOS (Field of Study) Segment** is included to give additional information about any degrees awarded by your institution.

FOS01 Academic field of study level or type. For example, 'M' for major, 'N' for minor, 'S' specialization, 'T' teaching.

FOS02 Qualifier for field of study code such as for CIP, HEGIS, etc. (optional).

FOS03 Code for the field of study (CIP, HEGIS, etc.).

FOS04 Text for field of study.

FOS05 Honors message for field of study.

k. **NTE Segments** or free form notes, which may be included almost anywhere (but please check the segment and loop diagram to be sure). Where possible, coded data elements rather than free form notes should be used to carry information, allowing procedures at the receiving school to be automated. The transaction set TS130 segment diagram shows where notes may be placed. Placement determines what higher segment is explained or expanded by the specific free-form note, but if possible, including the reference within the note will ensure the right interpretation. The NTE segment may occur just once, or up to 100 times in a particular location. The segment map provides that number.

NTE01 Never used in SPEEDE transcript

NTE02 60-character free-form message.

3. STRONGLY RECOMMENDED

Consider adding the following additional items to make the transcript more useful to the recipient:

a. **DMG segment** (demographic information). These data elements are extremely useful to the recipient in matching the transcript record with the admission record at the receiving school. These are date of birth and optionally, sex, ethnicity, race, marital status, and citizenship status.

DMG01 Code for format of date of birth.

DMG02 Date of birth in the format indicated in DMG01.

DMG03 Gender code (F, M, or U if provided).

DMG04 Marital status code, although this is not very useful in identifying the student by the receiving institution or agency.

DMG05 Race or ethnicity ('A' for Asian, 'B' for Black, 'C' Caucasian, 'E' other race or ethnicity, 'H' Hispanic, 'I' American Indian or Alaskan Native, 'N' Black Non-Hispanic, 'O' White Non-Hispanic).

DMG06 Citizenship status (example, '1' for U.S. Citizen).

b. **SUM segments** with GPA's and academic totals by semester. Generally similar to the overall academic summary (above).

SUM03 Cumulative summary indicator, 'Y' for cumulative, 'N' for non-cumulative (implies semester or term only). One may send multiple SUM segments in order to carry both session and cumulative totals.

4. CONSIDER THESE as NEEDED for Your Purposes

a. **RAP segments** as needed to carry requirements, proficiencies, and attributes for either the student in the early portion of the transaction set or for the course in the CRS loop. See earlier Texas TSIP document, Section II. D. (at the University of Texas at Austin website for examples of state-specific protocols adopted for use of RAP to meet state legislated requirements.

b. **Additional REF segments** for special course identifiers. You may use these to send special common course numbers for a state or another agency.

c. **TST segments** to carry test score records, including the test identity and date, along with SBT sub-test (identification) segments and SRE (actual) test score segments. AACRAO recommends against including national test scores such as ACT, SAT, GRE since AACRAO recommends the official scores should come from the original source (testing agency) and not from a third party.

d. **N3 and N4 segments** following the IN1 to provide student address info.

C. SPEEDE Data Elements Required, Needed, Recommended for Transcript - in Registrar/Admissions terminology.

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Institution Identification	
Receiving Institution	ISA08*, GS03*, N104
Sending Institution	ISA06*, GS02*, N104
Test/Production transmission	ISA15*
Date/time of transcript creation	BGN03-BGN05
Secondary vs. Postsecondary	ERP01
Reasons for Delivery	ERP segment
* See the section on delivery of transcripts	

Biographical Data	
Student Name	IN202
Social Security Number	REF02
Student Address	N3, N4 segments
Student Phone	PER segment
Date of Birth	DMG02
Gender	DMG03
Marital Status Code	DMG04
Ethnicity	DMG05
Citizenship	DMG06

High School Data	
High School Attended	N104 in SST loop
High School Diploma Status	SST01

College Academic Status	
Current Status at Issuing Institution	SST04, SST05, SST06
Current Enrollment Status	SST08
Residency for Fee Purposes	SST09
Academic Status by Session	SES segment

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Test Results	
Tests Taken	TST segment
Sub-test Identification	SBT segment following TST segment
Test or Sub-test Scores	SRE segment following TST segment
Information about Test	NTE segment following TST

Other Colleges Attended	
College Identifiers	PCL01, PCL02, PCL07
Attendance Range	PCL03, PCL04
Highest Degree Earned at that College	PCL05, PCL06

Academic Summaries	
Cumulative Undergraduate Grade Point Average and Credits	Overall SUM Segment
Cumulative Graduate Grade Point Average and Credits	Another Overall SUM Segment
Term or Semester Totals	SUM following the SES Segment
Cumulative Totals by Term or Semester	Another SUM after SES Segment
Credit Basis (Semester, Quarter, etc.)	SUM01

Special Designations about Student, including Honors, Awards, and Titles Earned	
Where Codes Exist	Overall RAP segments
Where No Codes Exist	NTE segments

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Session Information	
Start Date	SES01, SES02
Override Institution	N1 following SES segment
Semester/Quarter/Trimester	SES04
Academic Major	SES11, SES12
Probation, Dismissal, Honors	SES14

Course Information	
Term or Session	SES01
Basis for Credit	CRS01
Semester or Quarter Hours Type	CRS02
Hours or Credits (Value of the Course)	CRS03
Credits Earned	CRS04
Grade Legend or Special Value	CRS05
Grade Awarded	CRS06
Course Level	CRS08
Repeat Indicator	CRS09
Curriculum Codes	CRS10, CRS11
Grade or Quality Points Earned	CRS12
Department Abbreviation for the Course (at the school issuing the transcript)	CRS14
Course Number for the Course (at the school issuing the transcript)	CRS15
Course Title/Description	CRS16
Credit Source	CRS20
Info on Transfer Course Work (in Terminology of Initial School)	CSU segment
Requirements or Proficiencies Met by, or Attributes of Course, If Codes Exist	RAP segment after CRS segment

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Course Information	
Special Information about the Course that is not Coded	NTE segment after the CRS segment
State or National Course Reference Number	REF segment following CRS segment

Degrees Earned at Institution Issuing Transcript	
Degree Code (3 Characters)	DEG01
Date Awarded	DEG02, DEG03
Degree Title	DEG04
Degree Honors	DEG05
Academic Summaries for Work on Degree	SUM segment after DEG segment
Field of Study Identifying Honors	FOS segment after Degree segment

Free Form Notes	
General	NTE segment close to top of the file
About Individual or Demographics	NTE segment after IN1 segment
About Test Scores	NTE segment after TST segment
About Academic Summaries	NTE segment after SUM segment
About Session or Term	NTE segment after SES segment

Free Form Notes	
About a Course	NTE segment after CRS segment
About a Degree	NTE segment after DEG segment

D. Delivery Envelopes

1. ISA (outer envelope) record codes for sender and recipient

This is external to a set of transcripts, acknowledgments, or other transaction sets. .

Documentation for the ISA-IDEA and GS-GE envelopes is found with Interchange Control information, rather than with the data definition of the transcript (transaction set #130). The ISA is the only fixed-length segment, and this allows it to be examined by the recipient to determine the values used for data element and segment delimiters. For schools using the UT Austin EDI Internet Server, the ISA address of both sender and recipient must agree with those in the Server registrant table.
Some of the most relevant fields are:

ISA05 A 2 character code set qualifier for code identifying the sender of the transcript to the delivery medium (a VAN or the Internet Server, for instance). Typical values are 22 (FICE - common in Texas) and ZZ. (mutually defined).

ISA06 A 15 character code identifying the sender; left justified with blank fill to the right. Must be from the code set identified in ISA05.

ISA07 The code set qualifier for recipient.

ISA08 A 15 character code (counting spaces) for recipient, from set identified in ISA07.

ISA09 Date (970803, for example, for August 3, 1997). Year 2000 expansion has been approved for later releases. The latest version would show 20010403, for example, for April 3, 2001.

ISA10 Time of the interchange (2205 for 10:05 PM).

ISA12 Interchange control version number ("00304" for version 2). Note that interchange control standards do not incur significant change very often.

ISA15 'T' if test, 'P' if production (the Internet Server can use this to deliver test packets to different physical addresses).

2. GS envelope

This allows specification of a specific version or release of the standard being used, and it encapsulates like sets of transactions. That is, if an ISA envelope contains 4 transcripts (TS130) and 2 transcript acknowledgments (TS131) intended for the same destination, these should be wrapped in a pair of GS-GE envelopes within the ISA-IDEA envelope. Some relevant data elements:

GS01 The functional ID code ('ED' for student education record, or transcript, 'AK' for TS131 acknowledgments).

GS02 A code identifying the sender; codes agreed upon by trading partners, but without the usual (N103 and ISA07) code qualifiers. Many schools would use FICE here.

GS03 A code identifying the recipient.

GS08 The version/release identifier identifying the version of the X12 standards used for this transaction set. Examples are '003041ED0020' for release 2 and '003052ED0030' for release 3.

Chapter III : Conventions in Representing Data

A. Institutional Code Sets.

For delivery via the Internet Server, we're already covered (by the ISA identifier in the table of registrants), so let's deal with internal school identification (N1 and PCL segments). Having chaired the AACRAO and SPEEDE codes task force, I don't think we can mandate FICE on the N1 segments. It is not all that pervasive for internal coding within student information systems and it hasn't been updated in several years. I would support including school names (costs nothing on Internet), plus using the crosswalk export file for conversions as needed (see Chapter V, Section C).

B. Special grade qualifiers.

These are generally pretty neat, and eliminate the need for the old printed legends. The 500-series codes cover incomplete grades, courses in progress, and so on. It would be good to avoid use of code 64 ("other" pass fail types), which is defined for non-standard symbol. It is a vague code and must be worked out with the sender before it can be processed by the recipient. Rather, why not convert into 63's (Pass/Fail: S, U), 501/502's passing or failing, respectively, in a pass/fail course), or 530's/540's (Other passing or failing grade, respectively).

C. Transfer Credit.

One can send 'T' in the CRS01 field for transfer work, but that field may be needed for another characteristic. CRS20 set to "TC" is a better bet.

It is best to send the name of school even if you use code and code qualifier because there are so many different codes that can be used, and not everyone will have a code crosswalk table. List all prior colleges attended in PCL segments. List school at which student took transfer credit via an N1 segment in individual semester (session) segments.

D. Recentered SAT Scores.

Since these recentered scores have been with us for a while, not recentered would be the exception, and that could be handled by recentering them before sending, or by a free form note. Of course, this is not a problem for those not sending ACT or SAT test scores.

E. Institution Names

Some schools are not sending school name, just code. Because there are so many different codes, it was urged that we make school name a standard data element. SPEEDE can use 7 institutional code sets for institution code, including FICE. The Postsecondary Electronics Standards Council (PESC) has a crosswalk table you can purchase for $50 but it is not always up-to-date. It is also difficult to keep one you develop yourself up to date. Including the name makes all transcript print copies correct, regardless of the ability of the receiving institution to interpret your codes. Great quality assurance, too.

F. Student Names

One discussion centered on name and how it should be sent. The preferred way is in segments: last, first, middle, suffix, though it can be sent in one segment. Should not send former name as a part of the name, but with a separate IN1 loop.

G. ANSI ASC X12 Versions

Always try to code to the latest version, as you have support for the most recent version and the prior one. Be aware that others may not be so quick.

Anytime there is an X12 change made, we get the changes from our translation software vendors, so the code will change annually because all the things that make up our transaction sets are used by other industries. Most changes are upward compatible, though.

See Chapter V, Section A. for version and release information.

H. Test Transcripts.

If you put a 'T' in the ISA15 it allows the Internet Server to deliver test transcripts somewhere other than production, and puts it into a different file, which is good for testing.

I. Student ID Numbers.

It might be a good idea to store the type and source of your student numbers (social security numbers or other identifying numbers) on your data base. Some federal agencies are using a 9 digit number for International ID's. This may well become an issue in the future.

Chapter IV: Other Conventions

A. Transaction Set 131 (Acknowledgment)

An acknowledgment is to be generated for each transcript received, and it is to be delivered to the "certified acknowledgment address". Received acknowledgments are to be (programmatically) reconciled with records of transcripts sent, with discrepancies investigated and reported. This is a major part of the security built into the protocol, as it covers both authentication and modification (this leaves privacy, which can be covered by encryption or by contracts with public communication carriers). TS131 is very lean, with the following items automatically pulled from the received transcripts:

ISA, GS, ST, and BGN segments - all required by ANSI ASC X12, and the BGN02 ties back to the ST02 in the received batch, identifying the batch.

N1 records to identify sender and recipient.

REF to identify the individual.

QTY records showing the quantity (number) of degree and course records received.

SUM segment with last overall summary from the transcript sent.

IN1 and IN2 for student name.

SE terminator, along with GE, IDEA.

What is reasonable time frame for acknowledgments? After what time period do we start wondering if it was received or not. We need to add something to the Implementation Guide about the importance of the acknowledgment and when it should be sent. We suggest it should be the next time you send transcripts and no later than one week after receipt of the transcript.

Do we need inter-institutionally understood procedures for dealing with error recovery? A standard time after which we send a query if we have not received an acknowledgment?

Use common sense in a couple areas. First, don't expect SUM17 from version 1. Also, watch for schools that introduce their own delimiters to those being returned in segments as sent in the TS130 (schools really need to store them, then convert to use a single delimiter when preparing the entire envelope).

B. Testing Procedures.

One user (Jerry McGauhey at the University of Texas Health Sciences Center at Houston) has three rules:

1. Always have a test system

2. Have a variety of testing partners

3. Notify receiver before you start to send.

He has a dedicated Pentium PC that logs in and picks up transcripts from the server each day, but he also has a copy of EDI Smart on his PC and used it for testing. If the ISA15 = 'T', he sends the test file to a separate test FTP and it goes to Jerry's PC or separate E-Mail.

Barbara Hewitt, from Southwest Texas State University (SWTSU), whose system is homegrown, has a database set up to receive. When she previously was involved with SPEEDE, and when she would sign on with a new school, they would ask that school to send them the last 30 or 40 transcripts sent from that school and they

would check them line by line with the paper copies they previously received to confirm that they are correct. They did this testing with every new school. If the data received were test data, the filewould go to Barbara. If they were real, they would go to the admissions file. Barbara said that they have changed their software in some way with each school they've added. The testing identified coding errors in her software as well as new segments they had not planned to receive previously.

The SWTSU requirements disturbed some. Is that amount of testing really necessary?

Stones: I don't think 20-30 transcripts should kill anybody. I hope we can reach the point where new schools test sending and receiving with several schools or entities representing different methods, and can then be certified as such, and can reduce subsequent testing with each partner.

Stones: Those with homegrown receive software will tend to support only a subset of the structures allowed by ANSI ASC X12. New senders are more likely to create new needs and conditions for the recipient, and more testing should be expected. Homegrown senders can expect to generate more problems for recipients, and should expect to send parallel paper for a bit. Schools with homegrown and just a single partner probably don't have very robust systems.

It is generally agreed that no school should send a production SPEEDE transcript to another institution without first contacting the receiving institution to offer an opportunity for testing. Production trading relationships will be established upon a mutual consent between two institutions.

Furthermore, ISA15='T' should be used to denote test transcripts, with ISA15='P' for production status.

C. Parallel Paper

For schools that are in production status with electronic tanscripts, some students still ask that transcripts be sent on paper because they don't really trust the electronic mode. It may also be possible that some clerical personnel are requesting paper copies for students.

It is generally agreed that, once the testing period is over, we should send only electronic transcripts. Most schools don't give the student a choice, but simply agree to send the transcript, then send electronically to those who can receive in that fashion and on paper to those who cannot.

Be sure to either set a limit to the length of time for sending parallel paper or arrange a date to re-evaluate the practice. Do not continue indefinitely with paper.

D. Transcript Routing within Receiving Institution

Questions arise about transcripts sent to a different department on campus and whether those, if received in the electronic bundle, are being routed to where they are intended to go. There is a "Personnel Contact" in SPEEDE (PER segment) that can be used to identify where a transcript should go if it is for the 'Graduate School' or the 'School of Humanities', etc. See II.B.5, PER.

E. Mapping/Translation Time

How long does it take to do the mapping? Bill Morris, University of Texas at Pan American (using EDI SMART and SIS+), says "Mapping isn't the hard part. They have a pretty good guide for that. If you had someone in a dedicated mode, two to three weeks". The hard part is that establishing trading partners on different media has to do with translation software and finding what it doesn't do.

Chapter 5. Appendices

A. ANSI ASC X12 Versions and Releases.

Every 5 years or so, the latest release is reviewed by the ASC X12 subcommittees for submission to ANSI as a standard. In order to get standards in to the hands of users on a more frequent schedule, ASC X12 publishes “releases”. These “releases” are known as Draft Standards for Trial Use (DSTU)s. The DSTUs represent ASC X12-approved revisions of previously published Standards and Draft Standards. A release represents a snapshot in time of the development and maintenance efforts of ASC X12 as of a specific date. Releases are published once each year and are governed by version control numbers.

Ex: Version 2, Release 0 ANSI 1986 (002000)
Version 2, Release 1 X12 08/87 (002001)
Version 2, Release 2 X12 08/88 (002002)
Version 2, Release 3 X12 08/89 (002003)

For Version 2, Release 4, sub-releases were approved. DSTUs approved for publication in February or in June are published in a sub-release to permit implementation prior to the annual release publication in December.

Ex: Version 2, Release 4 X12 12/89 (002040)
Version 2, Release 4, sub-release 1 X12 02/90 (002041)
Version 2, Release 4, sub-release 2 X12 06/90 (002042)
Version 3, Release 1 X12 12/90 (003010)
Version 3, Release 1, sub-release 1 X12 02/91 (003011)
Version 3, Release 1, sub-release 2 X12 06/91 (003012) and so on.

SPEEDE Implementation Guide Version & ANSI ASC X12 Version Numbers

SPEEDE IG Version 1	ASC X12 Version 3021
SPEEDE IG Version 2	ASC X12 Version 3042
SPEEDE IG Version 3	ASC X12 Version 3052
SPEEDE IG Version 4	ASC X12 Version 4010

The normal recommendation would be to code to the most recent version of the Implementation Guide. The best recommendation would be to check with your trading partners (or potential trading partners) and see what version they are supporting. Beyond that, our recommendation would be that you code to SPEEDE IG Version 4, ASC X12 Version 4010.

B. Information Sources

Release 4 of the SPEEDE/ExPRESS Implementation Guide, version 4010, which includes the format, is now available on the Web, for TS130 (transcripts), TS131 (acknowledgments), TS146 (request for transcript), 147 (negative response to TS146), and TS189 (application for admission to educational institution, at:

http://www.standardscouncil.org/index.htm

Good general sources for information include:

AACRAO website:
http://www.aacrao.org

UT Austin SPEEDE website:
http://www.utexas.edu/student/giac/speede/

Postsecondary Electronic Standards Council - best resource for implementation guides or linkages.
www.standardscouncil.org/

Annual AACRAO SPEEDE EDI in Education Conference
October 21 - 23, 2001 - Tampa, Florida
http://usfweb.usf.edu/webforms/speede/

SPEEDE-L listserv (see AACRAO page for instructions)

Big (and expensive) ANSI ASC X12 books.

Illinois state guide:
http://www.reg.niu.edu/speede/

Ontario guide:
http://admissions.carleton.ca/edi/

C. Implementation Tools.

These may get you up and running more quickly:

1. UT Austin free, encrypted Internet EDI Server. See FAQ and other info at UT Austin SPEEDE web site. Detailed monthly usage reports are there too.

2. UT Austin Facilitation Software (UTFS), free, executable PC-based software to switch back and forth between proprietary (for TXETN members) Texas ETN format and TS130 (SPEEDE) format. See UT Austin SPEEDE web page.

3. Quick & Easy software, free and executable, to print SPEEDE transcripts, print ExPRESS (high school) transcripts, generate TS131 acknowledgments, and reconcile acknowledgments with records of transcripts sent. See UT Austin SPEEDE web page. Please read the instructions before calling.

4. Post-secondary Institution Code Crosswalk (distributed by PESC). At the PESC website (www.standardscouncil.org), select "Standards", then "Institutional Codes", then the Crosswalk PDF file.

5. ETS Electronic Score Reporting. www.ets.org/esr/.