

## **Demystifying Sign Language Transliteration: Utilizing the Source of Research to Achieve the Target of Competency**

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### **Abstract**

This paper reviews forty years of literature pertaining to the phenomenon commonly referred to as transliteration (as produced by ASL-English interpreters). Through this review, sign language transliteration (spoken English  $\leftrightarrow$  contact signing) is defined and separated from other forms of transliteration by applying the findings of various empirical studies found in the literature. The linguistic elements identified in the sign language transliterations of competent interpreters are incorporated into a diagnostic tool, which is designed to analyze a transliterated product. From this analysis, patterns of strengths and weaknesses are derived and utilized to form the basis of an individualized work plan from which the practitioner can improve through a targeted series of training activities.

### **Introduction**

For nearly forty years testing bodies have been assessing the product of ASL-English interpreters for two distinct signed products – interpretation and transliteration (Frishberg, 1990).

With the proliferation of research regarding the structure of American Sign Language (ASL) in the 1960s, 1970s, and 1980s (Stokoe, Casterline, and Croneberg, 1965; Valli, Lucas, and Mulrooney, 2005), the target for interpretation naturally became clearer with the growing body of literature. However, the same cannot be said of transliteration.

Early descriptions of transliteration vaguely referenced the signed target as a manually coded form of English [MCE], but provided little if any detail (Baker-Schenk and Cokely, 1980; Frishberg, 1990). This description went largely unchallenged and was broadly accepted for nearly 30 years.

In 1989, Winston challenged the instilled notion that transliteration was a simple recoding of spoken English, yet the fossilized description of transliteration persisted, remaining relatively static in a majority of the literature published throughout the 1990s (RID, 1996, “Defining interpretation and transliteration”). Siple (1997) provided an overview of the definitions, descriptions, and research conducted on the subject to that point, and Metzger and Fleetwood (1997) posited that transliteration was a literal translation from English, yet at the dawn of the 21<sup>st</sup> century the description of transliteration in a majority of textbooks remained predominantly unchanged (Kelly, 1999; Solow, 2001; Stewart, Schein, and Cartwright, 1998).

Over the last five years, however, transliteration has been the focus of numerous empirical studies (Larson, Turner, Custalow, and Breden, 2004; Sofinski, 2003; Sofinski, Yesbeck, Gerhold, and Bach-Hansen, 2001; Winston and Monikowski, 2003), which have highlighted the proliferation of ASL elements contained in the products of sign language transliteration. In addition, Sofinski (2002) published a detailed analysis of the linguistic elements of the signed product of a consumer who prefers sign language transliteration.

Further evidence in contrary to the established definitions and descriptions of transliteration has shown that even the K-12 setting stakeholders, with the exception of state coordinators, do not perceive manually coded forms of English (e.g., Signing Exact English) as “essential for entry level signed language interpreters at any instructional level of students being served” (Burch, 2005, p. 42), but instead use a sign language base of contact signing [“American Sign Vernacular” (Burch, p. 35)] as described by Lucas and Valli (1992).

Recently, the national interpreter testing instrument procedures moved away from directing interpreters to overtly differentiate between products of interpretation and transliteration and instead match the language of the Deaf consumer (Tipton, 2006). Yet with all

of these advances, interpreters and interpreter trainers are still unsure as to how to describe and instruct students and practitioners regarding sign language transliteration.

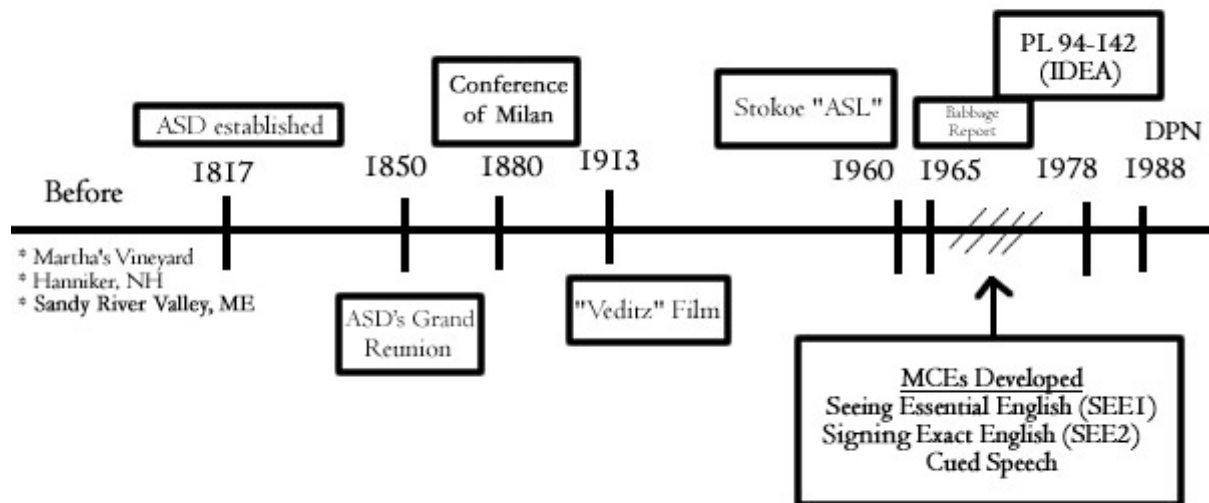
This paper is designed to provide participants with the foundation skills to do just these things by incorporating the findings of the recent corpus of research on transliteration, which expands on Winston's premise that transliteration is not a simple recoding of spoken English. The findings show that transliteration uses a range of contact signing as the target, the specific target of which varies by consumer. The resulting product consistently includes overt English influence as seen in the following: English-like mouth movements, varying types of English-like and ASL-like syntactic structures, and English influence in the phonological production of ASL lexical items (i.e., initialization).

The method introduced in this paper provides a framework to compare the transliterated products of students and in-service practitioners to the common ASL and English-influenced linguistic elements identified amongst the products of competent sign language transliterators studied in the research (see Appendix A). This method empowers individuals to assess the transliterated product of students and peers, as well as themselves, in order to determine strengths and weaknesses. From this baseline, participants are guided in the establishment of individualized work plans designed to increase the effectiveness of products known as sign language transliteration.

### **A Very Brief History - What has led us here?**

To be able to discuss this topic of sign language transliteration we must first define the term. Before we can define the term, we must understand the phenomenon that we study. In order to understand the phenomenon, we must have a clear and objective view of what factors have contributed to our arriving at this point in this professional discourse. Primarily there are four contributing factors to the current understanding of sign language transliteration – history, politics, assessment, and training.

# A Very Brief History of ASL



Timeline created by Bruce A. Sofinski & Natalie E. Williams, J. Sargeant Reynolds Community College, 2004-06

**Table 1. A Very Brief History of ASL**

Sign language transliteration does not exist in a vacuum. As with contact signing, sign language transliteration is a natural result of the interaction between spoken English and ASL. In contrast, other forms of transliteration, save oral transliteration, are based upon contrived forms of communication – MCEs (e.g., Signing Exact English and Cued Speech). (See Table 1.)

Communities using sign language existed in America prior to the formation of ASL (Groce, 1985; Lane et al., 2000) in locations such as Martha’s Vineyard, Massachusetts, Henniker, New Hampshire, and Sandy River Valley, Maine. The roots of ASL can be traced to the establishment of what is known today as the American School for the Deaf (ASL) in 1817. By 1850 during ASD’s Grand Reunion, it is written that no interpreters were needed for different signers because all could understand each other (Krentz, 2000). As with any language, changes within ASL have naturally occurred over time. This can be seen in viewing films made nearly a century ago of ASL narratives (Padden, 2004).

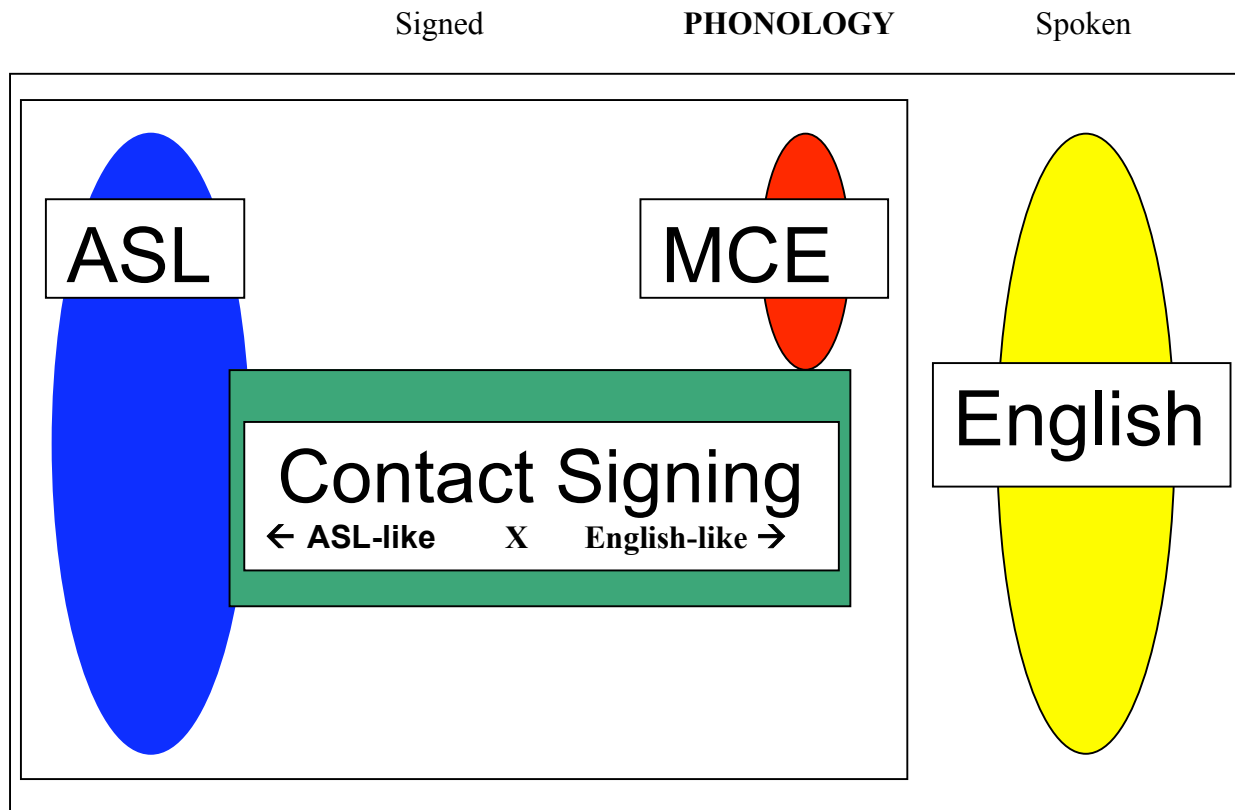
Ongoing politics also played an integral role in the development of sign language transliteration. As the Conference of Milan (1880) directly reduced the use of sign language in

the classroom, other actions of Alexander Graham Bell and Edward Miner Gallaudet during the mid-to-late 1800s negatively impacted the number of teachers of Deaf children who were themselves Deaf (Winefield, 1987). The cumulative results of over 80 years of oral-only education were addressed in the mid-1960s resulting in the development of various manually coded forms of English (MCEs) designed to teach deaf children in elementary school to read and write English.

At about the same time, Stokoe et al. (1965) published a dictionary describing these here-to-fore gestures as a language used by Deaf people. However, a majority of both hearing and Deaf people resisted the notion that ASL was a language for many years (Fant, 2000). With the implementation of PL 94-142, reauthorized as the Individuals with Disabilities Education Act (IDEA) in 1990, the notion that sign language transliteration was solely based upon MCEs and not the naturally occurring contact signing, at that time known as Pidgin Signed English (PSE) (Baker-Shenk and Cokely, 1980), was a by-product of these centuries of politics and history.

In 1972, the Registry of Interpreters for the Deaf, Inc. (RID) began assessing interpreters for two distinct products – interpretation and transliteration. This contribution solidified the idea that transliteration was solely between spoken English and an MCE (i.e., different forms of the same language), whereas interpretation was the process of working between English and ASL (i.e., two different languages).

By the end of the decade the National Interpreter Training Consortium (NITC) incorporated the definition of transliteration (i.e., English  $\leftrightarrow$  MCE) into curriculum, firmly entrenching this notion into interpreter education (Frishberg, 1990). These first works on curricula for pre-service and in-service interpreters were used as the basis for interpreter education that has largely continued into the 21<sup>st</sup> century (RID, 1996; National Council on Interpreting, 2006). Siple (1997) contributed a more complete history of the definition of the term “transliteration.”



**Table 2. A rethinking of the concept of a continuum between ASL and English.**

### **The Demystification of Sign Language Transliteration**

The concept of transliteration (spoken English  $\leftrightarrow$  MCE) is founded on the idea of a continuum of language (Baker-Shenk and Cokely, 1980) or communication (Solow, 1981) with ASL and English at polar ends of the spectrum. In these conceptualizations, the ASL-English continuum ranges from ASL to English with PSE, or contact signing, spanning the area of the continuum between these two languages.

A rethinking of such a continuum (see Table 2) focusing solely on phonology demonstrates that one would actually be required to change the mode of communication in order to successfully navigate such a continuum. For example, one would begin signing in ASL and move along through contact signing incorporating (in theory) fewer ASL linguistic features (morphologically, syntactically, semantically, etc.) and increase the use of linguistic features of English. At some point, the individual would change from signing to speaking in order to produce English.

## *Demystifying Sign Language Transliteration*

This rethinking also incorporates the notion that ASL, English, and contact signing are naturally occurring phenomena, whereas MCEs are contrived for the purpose of teaching English to elementary-aged students. As such, MCEs contain predetermined production rules that differ from any of the naturally occurring phenomena. In this conceptualization, the distinction between various forms of transliteration becomes more obvious. Transliteration may occur between spoken English and various MCEs, between spoken English and visible English (i.e., oral transliteration), as well as between spoken English and contact signing. This later example of transliteration is the sign language transliteration for which we have been searching for a definition.

The corpus of literature specifically regarding sign language transliteration largely descends from the seminal work by Winston (1989), which analyzed the work of one sign language transliterator during one event. Descriptively analyzing the product, Winston observed the following five strategies: sign choice, mouthing, restructuring, additions, and omissions. Over the next 15 years this work was expanded upon by numerous researchers, including two works by Siple, who adds pausing (1993) and additions (1995). In 1990 Locker investigated lexical equivalence within transliteration; Livingston, Singer, and Abramson (1994) studied the effectiveness of interpretation and transliteration, determining not only that interpretation was more effective, but that the transliteration products were too similar to differentiate between. This problem was resolved some time later as specific linguistic features and different types of sign language transliteration (i.e., sign-driven, speech-driven and hybrid) were delineated by Sofinski et al. (2001). This work also includes nine (9) common features of sign language transliteration, which provide more detail in regard to sign choice, mouthing, and restructuring.

Non-manual elements used in sign language transliteration are the focus of Sofinski (2003), which makes this work important for three reasons. First, it demonstrated that transliterators working in front of a live audience do not typically shadow (or produce) complete English sentences on the lips (see Appendix B). Second, these English mouth movements are commonly either additions to or substitutions of English words contained in the source. Finally, the study exemplifies that transliterators naturally incorporate common features of ASL in the product, including constructed action/dialogue, adverbials and use of space.

Monikowski and Winston (2003) analyzed the elements involved with marking topic-boundaries in sign language transliteration. This study defines boundaries, features and pauses

that are all conveyed through the use of prosodic features. Larson et al. (2004) study the use of omissions in sign language transliteration finding “that omissions can be categorized into at least three distinct categories: Omission of Structure, Omission of Morphology and Omission of Repetition” (pp. 21-22).

### **Identifying Patterns and Linguistic Features of Sign Language Transliteration**

The four above-mentioned studies published since 2000 comprise the foundation for the “Pattern and Linguistic Feature Checklist” (see Appendix A). The checklist is broken down into six sections. The diagnostician is required to identify the predominant pattern within each section, and identify if any of the remaining features were demonstrated in the product.

For example, the first section relates to shadow, which is defined as English-like mouthing. First, a determination of the predominant pattern is required. The choices are: textual – as if the mouth movements were those of “a” storyteller (not necessarily the source); sentential – the predominant pattern was of complete sentences, which together are not like the mouth movements of “a” storyteller; phrasal – less than a sentence, but more than a word; and, lexical – a word or a couple of words back-to-back.

Once the predominant pattern is identified, then any other feature that was demonstrated is checked under the “demonstrated feature” column. So, during the product did shadow (English-like mouthing) accompany fingerspelling? If yes, then that feature is marked. The same is done with shadow absent on inflected verbs and shadow absent on classifier predicates.

This process continues through the remaining five sections. Lexical form focuses on the handshape. Is the pattern the incorporation of signs that are non-initialized (i.e., base/root signs with minimal English influence) or is the pattern one of initialization (i.e., the handshape reflects English spelling)? The syntax section deals with the ordering of constituents along with NMS use related to syntactic structuring.

The decision-making choice for producing a particular sign or concept is the area under consideration in “lexical meaning base.” The primary question is, is the pattern one of glossing (i.e. selecting a particular sign due to the English word spoken in the source) or source language intrusion, or is the meaning or intent of the speaker being matched with the language (i.e., ASL semantic meaning of the sign) the primary motivation for choosing that rendition?



The use of space section deals primarily with the establishment and incorporation of referents within the transliterated product. How consistently were the referents established and once established, was the referent consistently incorporated into the product? Finally, the NMS/Prosody section deals with the incorporation of non-manuals supporting topicalization, rhetorical questions, and adverbials, as well as topic-boundaries (Monikowski and Winston, 2003).

### **Developing an Individualized Workplan**

Each student is a unique individual who brings a different set of experiences, including strengths and weaknesses (Sofinski, 2005). Once strengths and weaknesses have been identified, then these patterns are used as the basis for an individualized work plan through which the effectiveness of the transliterated product can be increased. In this way, each individual's work plan is tailored to that individual. This plan is to create a living document, not a static set of goals, which is constantly updated, so, as weaknesses become strengths, a new set of goals emerges from within the process. An additional objective is for the individual to end the training with a set of goals not yet attained and an understanding of how to begin to work on these goals.

### **Further Research**

One area in need of further research relates to the specific change in elements of sign language transliteration when produced in an assessment environment as opposed to a live environment. In comparing the results for shadow (mouth movements) of Sofinski et al. (2001) and Sofinski (2003), the change in the type of mouth movements from a more textual presentation to a phrasal presentation is quite astonishing. One work, Mather (2005), provides one possible explanation for this phenomenon in her study of attention getting strategies in interpreted classrooms. The change in mouth movements to less English representation when the live audience is present may be the result of the transliterator attempting to maintain the attention of the students in the room.

Another area in need of study is the in-depth analysis of mouth movements in sign language transliteration and comparing those findings to mouth movements expected on the National Interpreting Certification (NIC). The NIC preparation packet continues to incorporate the 1996 definition of transliteration (RID, 1996) regarding mouth movement patterns, which

states: “Cohesive English sentences are visibly presented on the lips, either as exact words from the original text or as English paraphrasing of the original text.” This definition is not supported by the findings of Sofinski (2003) who states, “In fact, less than 1% of the 220 structures analyzed (i.e., 44 source structures compared with the relative segments of five interpreting products) are complete English sentences.”

## **Conclusion**

Sign language transliteration is a distinct type of transliteration that is defined as employing contact signing as a base. Products of sign language transliteration share numerous ASL and English-influenced linguistic features in common, including the following three clear and readily identifiable English-influenced features: English-like mouthing of (primarily) phrases; ASL and English-like syntactic restructuring of the source message; and, increased use of phonological initialization of ASL lexical items when such is necessary to convey a specific English word. In this analysis, while elements of sign language transliteration products can be analyzed to show the incorporation of these linguistic elements, it is further evident that practitioners utilize the same process to produce products identified as sign language interpretation. The difference in the products lies within in the target of the process – ASL for interpretation and contact signing for transliteration – and not within different processes.

## **About the Author**

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Appendix A/ Pattern & Linguistic Feature Checklist

Name: \_\_\_\_\_

**PREDOMINANT**      **DEMONSTRATED**  
PATTERN            FEATURE            DESCRIPTION  
(select one)            (mark if noted)

**Shadow = English-like mouthing**

- |       |           |   |
|-------|-----------|---|
| _____ | %%%%%%%%% | * Textual (like a story)                          |
| _____ | %%%%%%%%% | * Sentential (identify <u>complete</u> sentences) |
| _____ | %%%%%%%%% | * Phrasal (< sentences ... > words)               |
| _____ | %%%%%%%%% | * Lexical (word ... word word ... word)           |
| _____ | _____     | * <u>Accompanies</u> Fingerspelling               |
| _____ | _____     | * <u>Absent</u> on Inflected Verbs                |
| _____ | _____     | * <u>Absent</u> on Classifier Predicates          |

**Lexical Form = focus on handshape**

- |       |           |  |
|-------|-----------|--|
| _____ | %%%%%%%%% | * Base/Root Signs (minimal English influence)                              |
| _____ | _____     | * Initialization when base/root sign unclear in context or does not exist. |
| _____ | %%%%%%%%% | * Initialization (handshape reflects English spelling)                     |

**Syntax = ordering of constituents/NMS use**

- |       |           |   |
|-------|-----------|---|
| _____ | %%%%%%%%% | * Word-for-word following source (with deletions)     |
| _____ | _____     | * Word-for-word with PLEDGE (few deletions)           |
| _____ | _____     | * Deletion-pronouns, articles, preps & infinitives    |
| _____ | %%%%%%%%% | * Phrasal restructuring (cause-effect; topic-comment) |
| _____ | _____     | * Omission of <u>repeated</u> nouns and prep phrases  |

**Lexical Meaning Base = what drives sign choice**

- |       |           |  |
|-------|-----------|--|
| _____ | %%%%%%%%% | * English “gloss” (i.e. source language intrusion) |
| _____ | _____     | * English prepositions (in, of, with, from)        |
| _____ | _____     | * Rep. English form morphology (“out”+”side”)      |
| _____ | _____     | * Bound morphemes (-MENT, -ING, -LY)               |
| _____ | %%%%%%%%% | * ASL semantic (i.e. meaning of ASL lexical item)  |
| _____ | _____     | * Omission of affixes, tense & plural markers      |

**Use of Space = signed representation of mental construct**

- |       |           |  |
|-------|-----------|--|
| _____ | %%%%%%%%% | * referents established and incorporation consistent     |
| _____ | %%%%%%%%% | * referents established, but incorporation inconsistent  |
| _____ | %%%%%%%%% | * referents not established, but incorporation attempted |
| _____ | %%%%%%%%% | * space inconsistent, inappropriate or unattempted       |
| _____ | _____     | * listing  |
| _____ | _____     | * tokens/surrogates                                      |
| _____ | _____     | * directional verbs                                      |

**NMS/Prosody (not facial expression to convey emotion)**

- |       |           |   |
|-------|-----------|---|
| _____ | %%%%%%%%% | * present                                       |
| _____ | %%%%%%%%% | * absent  |
| _____ | _____     | * topicalization                                |
| _____ | _____     | * rhetorical question                           |
| _____ | _____     | * adverbials                                    |
| _____ | _____     | * topic boundaries – manual features (clasping) |
| _____ | _____     | * topic boundaries – pauses                     |
| _____ | _____     | * topic boundaries – NMS (eye gaze, etc.)       |

**Appendix B/ Excerpts of Mouth Movements by Subject “VDDHH: TAP and Virginia Relay,”  
by Roach**

**KEY:**

S = source; other lines represent the mouth movements identified in the products of five transliterators  
Information following a forward slash “/” indicates the manual elements co-produced with the mouth movements preceding the forward slash “/”.  
Information in parenthesis provides a description of other manual or non-manual elements in the product.

S: Here, at VDDHH, we offer two programs.

E1: Here, VDDHH, we offer two programs.

E2: Here, at VDDHH, we offer different programs.

M1: Here, VDDHH, we offer two kinds of programs.

H1: We offer two programs.

H2: Here, at VDDHH, we offer two programs.

S: The Technology Assistance Program, known as TAP, and the Virginia Relay Service.

E1: Technology Assistance Program, also called TAP, and Virginia Relay Service.

E2: Technology Assistance Program, called TAP, and the Virginia Relay Service.

M1: [*ADVERBIAL/CL-5(2h)*-on right ”program on right”] Technology Assistance Program [(indistinguishable)/TO-NAME] TAP, and the Virginia Relay Service.

H1: Technology Assistance Program, known as TAP, and (close mouth)"/"second on list" Virginia Relay Service

H2: (none identified)"/"first on list" Technology Assistance Program, called TAP, and (none identified)"/"second on list" Virginia Relay Service, VRS.

S: These are two programs that we offer.

E1: Two programs offer here.

E2: Two programs that we offer.

M1: These two kind of programs we offer.

H1: Two programs we offer.

H2: Two programs we offer.

S: The first program, Technology Assistance Program or TAP, is a (sic) equipment program,

E1: First program called TAP or Technology Assistance Program. That-(front left) equipment program.

E2: The first one ... Technology Assistance ... we call TAP for equipment program.

M1: First program, Technology Assistance Program ... equipment program ...

H1: The first, Technology Assistance Program/T-A-P ... equipment program ...

H2: First, [(purse lips)-*ADVERBIAL*"/"first on list"], TAP ... that's equipment program.