

# TECH TALK

John Huy

University of Kansas

*[Editor's Note: John graciously "volunteered" to write the following note on video standards. However, we would like to find a regular editor for this column. If you are interested, please contact me.]*

## International Television Standards

One of the most commonly asked questions in this profession (and probably one of the most written about) has to do with the technical problems associated with the use of foreign-produced videotapes. Fortunately there are many "authentic" foreign language video materials available to foreign language educators. Unfortunately many of them cannot be played on conventional video equipment.

The underlying problem is that television/video signals around the world are recorded and broadcast in different standards, each incompatible with the others. There are three basic standards used in the world: NTSC (National Television Systems Committee) is used in North America, most of Central America, parts of South America, Japan, South Korea and the Philippines; PAL (Phase Alternation by Line) is found in the United Kingdom, much of Western Europe, mainland China and parts of South America and the Middle East; and SECAM (Sequential Color and Memory) is the standard for France, Eastern Europe, the U.S.S.R., parts of the Middle East and some areas of Central and South America. There are also several sub-standards (such as PAL B, PAL G, PAL M and PAL N).

Simply put, the incompatibilities lie in the different line and cycle scans. NTSC is rated at 525 lines and 50 fields per second while both PAL and SECAM are rated at 625 lines at 60 fields per second. Thus, an American produced videotape will not work in France, Spain, or China and vice versa. Tapes recorded on one system will not play back on another.

In order to benefit from videocassettes recorded in another standard other than NTSC, there are basically four options:

1. If you plan to use a lot of foreign tapes, conversion from one of the foreign formats to NTSC is probably preferred, since you will be able to play the NTSC tapes just about anywhere on standard video equipment. A standards converter can convert a tape from one standard to another, and will often slightly improve the signal as well. This is a very expensive piece of equipment that costs anywhere from about \$40,000 to several hundred thousands.
2. If you plan to make extensive use of your foreign videotapes, but can't afford the expensive standards converter, you can send your tapes out for a professional conversion that can cost anywhere from about \$75-\$300 per hour (most charge around \$100 per hour; some university setups charge less).

*John Huy is Director of the Ermal Garinger Academic Resource Center at the University of Kansas, Lawrence, Kansas, and Advertising Manager of the IALL Journal.*

3. If you will only occasionally use foreign format video, or if you want the capability to play such video in their original format, you can purchase a multi-standard monitor and VCR which will play back all standards (both monitor and VCR are required). Costs vary (\$1500-\$2500) depending on brand, format (VHS, Beta, 3-4"), features, etc.
4. You can also purchase an Image Translator from a Florida-based video company called Instant Replay which can play back foreign-standard tapes on ordinary NTSC TVs, although SECAM tapes will play back on standard sets only in black & white. Prices range from \$695 to \$1,995.

The difference between Image Translators and other multi-standard VCRs is that multi-standard decks play tapes in the format in which they were recorded, thus requiring a compatible TV. Image Translators convert foreign signals into quasi-NTSC signals, retaining the original line and field frequencies, and enabling them to run on most standard NTSC TVs.

The major choices (conversion vs. original playback) depend largely on the extent to which you plan to offer foreign format videotapes to students or for faculty use. When you begin to consider the cost of several foreign format VCR/Monitor combinations, plus the difficulty of moving this special equipment around your campus, the cost of a standards converter suddenly begins to appear more cost effective. Also, if you do purchase a standards converter, you may find a demand for your services by other departments who need to convert foreign videotapes.

I have only skimmed the surface by offering a basic explanation of the different television standards and options. I'm sure this (and more) will be discussed at upcoming regional and national IALL meetings. The video "revolution" has arrived and we need to plan how to handle the increased demand for foreign as well as national video.