

HOW STANDARDS PROLIFERATE:  
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)



## Review of Common Format CSV Files

Comma Separated Value  
(Delimited)

## Definition of the CSV Format

- ❑ Each record is located on a separate line, delimited by a line break (CRLF). For example:

aaa,bbb,ccc<CRLF>

zzz,yyy,xxx<CRLF>

- ❑ The last record in the file must have an ending line break. (Errata ID: [6230](#))

For example:

aaa,bbb,ccc<CRLF>

zzz,yyy,xxx<CRLF>

## Definition of the CSV Format(2)

- ❑ often contains an optional header line as the first line with the same format as normal record lines. Header will contain names corresponding to the fields in the file and should contain the same number of fields as the records:

**field\_name,field\_name,field\_name CRLF**

aaa,bbb,ccc CRLF

zzz,yyy,xxx CRLF

- ❑ Within the header and each record, there may be one or more fields, separated by commas. **Each line should contain the same number of fields.** Spaces are considered part of a field and should not be ignored. The last field in the record must not be followed by a comma. For example:

aaa,bbb,ccc

## Definition of the CSV Format(2)

- ❑ Each field may or may not be enclosed in double quotes. If fields are not enclosed with double quotes, then double quotes may not appear inside the fields. For example:

- "aaa","bbb","ccc"<CRLF>

- zzz,yyy,xxx<CRLF>

- ❌ aaa,b"bb,ccc<CRLF>

- ❑ Fields containing line breaks (CRLF), double quotes, and commas should be enclosed in double-quotes. For example:

- "aaa","b" <CRLF>

- bb","ccc" <CRLF>

- ❑ If double-quotes are used to enclose fields, then a double-quote appearing inside a field must be escaped by preceding it with another double quote. For example:

- "aaa","b""bb","ccc"