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Standard Terminology Relating to Sewn Products Automation[1]

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ε¹ NOTE—Terminology was added in July 2008.

1. Scope

1.1 This standard is compilation of all terminology which is related and specific to Sewn Products Automation.

1.2 Diagrams and illustration included in this compilation are intended to provide a better understanding of the concepts defined.

2. Referenced Documents

2.1 *ASTM Standards:*[2]
D6673 Practice for Sewn Products Pattern Data Interchange—Data Format
D6674 Guide for Proficiency Test Program for Fabrics

3. Terminology

alternate grade reference line, *n*— an optional internal line whose orientation is used for the " *x*" axis of a grade rule.
    DISCUSSION—The application of a grade rule will be oriented to the grade reference line unless an alternate grade reference line is specified. (See **grade reference line**.)

annotation text, *n*—optional user text that can be specifically defined and displayed when the pattern piece is plotted.
    DISCUSSION—Annotation text is usually placed in specific locations within the piece boundary to identify important information such as the drill hole diameter.

base size, *n*—the digitized or created size of a style. (See **sample size**.)

block, *n*—*for cutting standard def.*, a sequence of commands within a cut file and which activate a response by the automated fabric cutter.
    DISCUSSION—A block keyword should be used to identify the start of information for a pattern piece and an end block keyword is used to stop the data exchange.

command, *n*—a two letter sequence, always written in capital letters, that governs interpretation of formatted data. Also known as a *syntax command*.

curve interpolation point, *n*—those intermediate points generated between curve points by means of a CAD vendor's system curve interpolation algorithm; those points used to create a curve in order to represent a contour.

curve point, *n*—a user defined point on a contour.
    DISCUSSION—When a curve interpolation algorithm is used to generate a curve, the resulting curve must pass through all user defined curve points. (See **curve interpolation points**, **validation curve**.)

curve tolerance, *n*—the maximum perpendicular distance that the resulting curve can deviate from the original curve after transferring the data for the first time.
    DISCUSSION—Sufficient points should be added by the originating system to keep the shape of the curve within the user defined curve tolerance.

cut file, *n*—numerically controlled fabric cutter instructions entered in blocks of ASCII characters.

cut lines, *n*—the outside edges of a pattern piece used as a guide for cutting out the pattern piece. (See **piece boundary**.)

data block, *n*—an organized group of commands and parameters preceded by a header and followed by a terminator.

drill hole, *n*—a point that is part of a pattern piece that is not part of any line.
    DISCUSSION—Drill holes may be used to denote pocket or buttonhole placement.

format classification interrogation, *n*—interactive direct on-line communication between systems which generates cut file interchange and fabric cutting equipment.

function codes, *n*—codes used to control fabric cutter instructions and govern interpretation of subsequent commands and data in a block.

grading, *n*—a method of creating multiple sizes from a base or sample size using a grade rule.

graded nest, *n*—a collection of graded piece boundaries that represent every size in the size line for a particular pattern piece.

DISCUSSION—The CAD vendor's system will apply the grade rules from the grade rule table to the base size of a piece to create the graded nest.

grade reference line, *n*—the horizontal line that defines the *x* axis for the pattern piece.

DISCUSSION—The position of all other graded lines and points on the piece are determined in reference to grade reference line(s). A piece must have a grade reference line and may have one or more alternate grade reference lines. (See **alternate grade reference line**.)

grade rule, *n*—a named set of grade rule values consisting of one grade rule value for each size in the size line. (See **grade rule values**.)

DISCUSSION—A grade rule is named by the grade rule identifier.

grade rule identifier, *n*—a user defined numeric name given to a grade rule.

grade rule table, *n*—a collection of grade rules.

grade rule table data exchange file, *n*—a text file to communicate grade rule values between different CAD/CAM systems.

grade rule table name, *n*—a user defined name given to a grade rule table.

grade rule values, *n*—values that define how an associated data point on a pattern piece moves from one size to another expressed in delta *XY* units.

grainline, *n*—line used to define the horizontal orientation, normally the *X*-axis, of a piece in a marker.

DISCUSSION—The grain line is always parallel to the selvage (edge) of the material.

header, *n*—a specific group of commands required at the beginning of a data block.

internal cut outs, *n*—lines, part of a pattern piece, not part of the piece boundary, which are cut during the cutting process.

DISCUSSION—If the piece contains a hide attribute, the internal cut outs are used to denote flaws in the hide.

internal lines, *n*—lines, part of a pattern piece, not a part of the piece boundary, which are not cut.

DISCUSSION—Internal lines are not cut but may be drawn during the cutting process.

line, *n*—a collection of points that define part of a pattern piece.

mirror line, *n*—a line, part of a pattern piece, that divides two symmetrical parts.

DISCUSSION—Since the pattern piece is symmetrical, only half of the piece needs to be digitized or created in the system. The other half is reflected across the mirror line.

notch, *n*—a shape used to mark a location.

DISCUSSION—Notches are often used to line up two pieces of material to be sewn together.

parameters, *n*—values that modify the action of a command.

piece boundary, *n*—a collection of lines that define the shape of a piece.

piece information, *n*—information that is piece specific.

piece system text, *n*—information provided in the transfer file that is piece specific.

piece system attributes, *n*—information provided in the transfer file that is piece specific.

plaid reference line(s), *n*—used for alignment of pattern pieces on plaid material during marker making.

plot file, *n*—instructions organized in formatted blocks of ASCII characters and stored in a computer file which are used to control a plotter or printer.

sample size, *n*—the base size from which grade rule values are established.

sew lines, *n*—lines that indicate where stitching of pattern pieces is to be done.

size list, *n*—a list of all size names, in order from smallest to largest, for a particular style.

size name, *n*—a user defined name for a graded size.

DISCUSSION—The size names can be alphabetical, numerical, or alphanumerical.

smoothing, *n*—a process in a CAD vendor's system that adds curve interpolation points to a curve. (See **curve interpolation point**.)

stripe reference line, *n*—line used for alignment of pattern pieces on stripe material during marker making.

DISCUSSION—The stripe reference line can be either inside or outside the piece.

style, *n*—a collection of pattern pieces and related information that defines a sewn product.

syntax command, *n*—see *command*.

terminator, *n*—ASCII character(s) that signify the end of an instruction (with any associated parameters),or a data block.

turn point, *n*—point where a contour makes a sudden change in direction.

DISCUSSION—If either line coming into the turn point is being smoothed, the turn point marks the end of smoothing.

validation curve, *n*—a set of points that represent the original curve in the exporting CAD system within curve tolerance of the original curve.