2020

Sketch-Thru-Plan Military Symbol Gestures

Version History

Date	Description	Version
Feb 2020	Initial draft	1.0

Contents

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1   Introduction

This document describes the stroked/inked gestures employed by Sketch-Thru-Plan (STP) to designate the location of military symbols being placed on a map via a stylus, touch or mouse, as users define Courses of Action.

STP fuses this location information with the users' spoken doctrine to determine which symbol is desired at the particular location. As an example, the user may draw a Point and speak "Recon Platton" to place such a unit at a desired location on the map.

Most symbols can be placed by a Point, Line or Area location. STP also supports additional gestures that simplify the specification of the location of a large number of symbols that require additional width, angle and direction information. All of these are described in detail here.

1.1   Intended audience

- Developers looking for details on STP's stroked gestures and related anchor points
- General users that want to deepen their understanding of stroked gestures they can use to place different categories of symbols
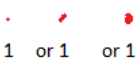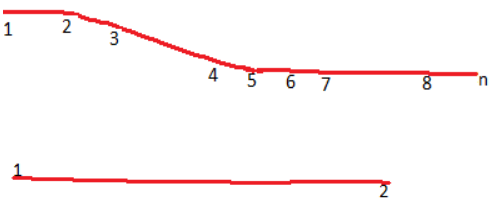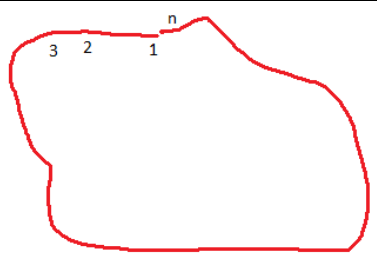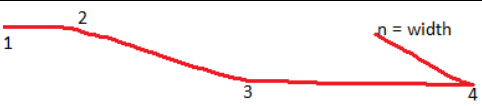
1.2   Related documentation

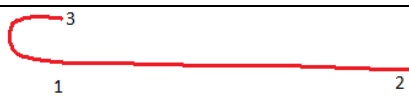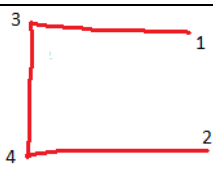- MIL-STD-2525D Joint Military Symbology Standard

2   Overview

As part of the natural language interpretation that it performs, STP extracts *anchor points* that describe location, size and orientation of the symbols. STP follows the anchor points Draw Rules definitions both in terms of the number of points as well as their order, as documented e.g. in Appendix H of the MIL-STD-2525D Joint Military Symbology standard.

To simplify input, STP adopts a few classes of single stroke representations that can be used to place symbols that may require multiple anchor points. The great majority of symbols can be placed by simply using a Point, a Line, or an Area (PLA). For the small number of symbols that require additional detail that will not fit within PLA stroke gestures, STP provides five additional stroke styles – "harpoon", "u-bend", "hook", "open circle" that allow for the capture of the required anchor points in a uniform way across a variety of different symbols. Table 1 summarizes the supported stroked gestures.

Table 1 - STP stroked gestures

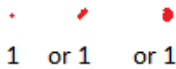| Sketch	Description	Sample[1]	Class
Point	Point, small line, small dot/circle Single anchor point indicates the middle or base of a symbol		Point
Line	One or more line segments of a single stroke. Two or more anchor points indicate beginning and end of potentially multiple line segments. Some symbols are defined by a single (2-point) segment. Inflection points are automatically ignored in this case.		Line StraightLine ArrowThin
Area	Single-stroke line enclosing an area. Multiple anchor points delimiting an irregular area. A segment closing the delimited area is implicitly created, connecting the last point of the stroke to the first		Area
Harpoon	Single-stroke "harpoon" shape, with the barb indicating the width. Three or more anchor points, indicating beginning and end of potentially multiple line segments. The last point provides the witdth		ArrowFat
Hook	Single-stroke "hook" shape. Three anchor points: the first two indicate the beginning and end of line segment; the last point provides the start position of the hook		Hook
"U"	Right-angled "U" shaped stroke. Three or four anchor points, given by the beginning, end of the "U" shape, followed by two points indicating the inflection points at the closed/bottom of		Ubend UbendThree Points

[1] Numbering indicates in general the direction the sample stroke was drawn. Exceptions are: "hook", where "3" is the first point, "vee", where point number 2 is the first, followed by the vertex (1), ending in 3, and "opencircle", where 1 indicates the center and 2 the first point.

	the "U" (if 4 points) or middle of the "U" (3 points)		
"V"	"V" shaped stroke. Three points, given by the vertex of the "V", followed by the beginning and end of the "V" shape		Vee
Open circle	Circular stroke, drawn clockwise. Two ancho points: center of the circular area and the beginning of the stroke		OpenCircle
Symbol-specific	Multi-stroke, symbol-specifc sketched	Multi-stroke, symbol-dependent	Multipoint

STP's sketch recognizer classifies the gestures according to more fine-grained categories or *gesture classes*, depending on the type of symbol. Gestures that are similar from the perspective of a user may be assigned to different classes, depending on the particular Draw Rules specified by MIL-STD-2525C/D for the symbol. Different classes typically have different number of points, or a different order in which these points are presented. As an example, "U" shaped strokes can sometimes be represented by 3 or by 4 points, presented in different orders. In the remaining sections of this document, these classes are described in further detail. This information is of more interest to developers that are looking to understand details required to properly render a symbol, for example.

3 Point

Number of points	1
Symbols	Most Unit and Equipment symbols; single point Tactical Graphics
Anchor position	Center or base of the symbol
Stroke gesture	Point, small line or dot

Examples (stroke shown in orange-purple)	
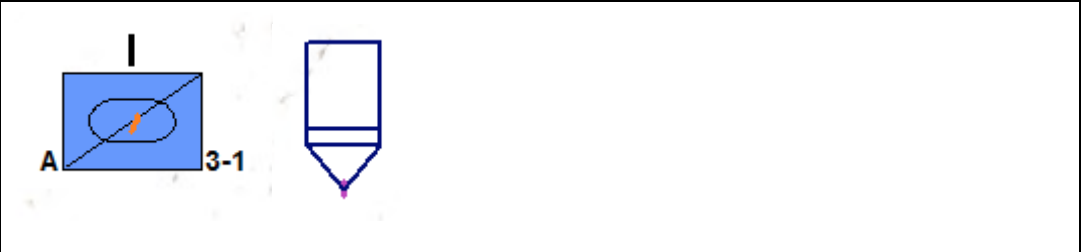
Representative symbols (Units and Equipment are not displayed here)

SIC Fragment	Comment
TD- -- --	DESTROY
TN- -- --	NEUTRALIZE
GGP -- --	POINTS
GGP U- --	UNDER SEA WARFARE
GGP UU --	UNDERWATER
GGP UU D-	DATUM
GGP UU B-	BRIEF CONTACT
GGP UU L-	LOST CONTACT
GGP UU S-	SINKER
GGP UY --	SONOBUOY
GGP UY P-	PATTERN CENTER
GGP UY D-	DIRECTIONAL FREQUENCY ANALYZING AND RECORDING (DIFAR)
GGP UY L-	LOW FREQUENCY ANALYZING AND RECORDING (LOFAR)
GGP UY C-	COMMAND ACTIVE SONOBUOY SYSTEM (CASS)
GGP UY S-	DIRECTIONAL COMMAND ACTIVE SONOBUOY SYSTEM (DICASS)
GGP UY B-	BATHYTHERMOGRAPH TRANSMITTING (BT)
GGP UY A-	ANM
GGP UY V-	VERTICAL LINE ARRAY DIFAR (VLAD)
GGP UY T-	ATAC
GGP UY R-	RANGE ONLY (RO)
GGP UY K-	KINGPIN
GGP US --	UNDERSEA SEARCH
GGP US A-	UNDERSEA SEARCH AREA
GGP US D-	UNDERSEA DIP POSITION
GGP US C-	UNDERSEA SEARCH CENTER
GGP R- --	MANOUVER REFERENCE POINT
GGP RS --	SPECIAL REFERENCE POINT
GGP RN --	NAV REFERENCE
GGP RD --	DLRP
GGP RI --	POINT OF INTEREST

GGP W- --	WEAPON
GGP WA --	AIM POINT
GGP WD --	DROP POINT
GGP WE --	ENTRY POINT
GGP WG --	GROUND ZERO
GGP WM --	MSL DETECT POINT
GGP WI --	IMPACT POINT
GGP WP --	PREDICTED IMPACT POINT
GGP F- --	FORMATION
GGP H- --	HARBOR (GENERAL)
GGP HQ --	HARBOR POINT Q
GGP HA --	HARBOR POINT A
GGP HY --	HARBOR POINT Y
GGP HX --	HARBOR POINT X
GGP O- --	HARBOR ROUTE
GGP OZ --	RENDEZVOUS
GGP OD --	DIVERSIONS
GGP OW --	WAYPOINT
GGP OP --	PIM
GGP OR --	POINT R
GGP A- --	AIR CONTROL
GGP AP --	COMBAT AIR PATROL (CAP)
GGP AW --	AIRBORNE EARLY WARNING (AEW)
GGP AT --	TACAN
GGP AK --	TANKING AIR CONTROL POINT
GGP AA --	ANTISUBMARINE WARFARE , FIXED WING - TODO
GGP AH --	ANTISUBMARINE WARFARE, ROTARY WING - TODO
GGP AO --	TOMCAT
GGP AR --	RESCUE AIR CONTROL POINT
GGP AL --	REPLENISH AIR CONTROL POINT
GGP AM --	MARSHALL AIR CONTROL POINT
GGP AS --	STRIKE IP
GGP AC --	CORRIDOR TAB
GGP P- --	ACTION POINTS (GENERAL)
GGP PK --	CHECK POINT
GGP PC --	CONTACT POINT [square]
GGP PO --	COORDINATION POINT
GGP PD --	DECISION POINT
GGP PL --	LINKUP POINT
GGP PP --	PASSAGE POINT
GGP PR --	RALLY POINT
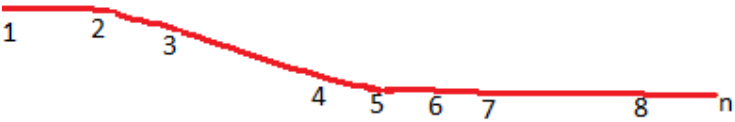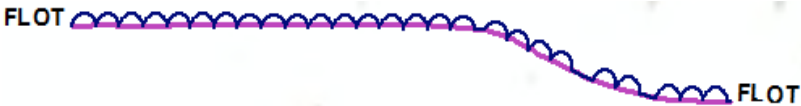
GGP PE --	RELEASE POINT
GGP PS --	START POINT
GGP PW --	WAYPOINT
GAP -- --	POINTS
GAP P- --	AIR CONTROL POINT (ACP)
GAP C- --	COMMUNICATIONS CHECKPOINT (CCP)
GAP U- --	POP-UP POINT (PUP)
GAP D- --	DOWNED AIRCREW PICKUP POINT
GDP -- --	POINTS
GDP T- --	TARGET REFERENCE POINT (TRP)
GDP O- --	OBSERVATION POST/OUTPOST
GDP OC --	COMBAT OUTPOST
GDP OR --	OBSERVATION POST OCCUPIED BY DISMOUNTED SCOUTS OR RECONNAISSANCE
GDP OF --	FORWARD OBSERVER POSITION
GDP OS --	SENSOR OUTPOST/LISTENING POST (OP/LP)
GDP ON --	NBC OBSERVATION POST (DISMOUNTED)
GOP -- --	POINTS
GOP P- --	POINT OF DEPARTURE
GNP -- --	NAVAL CRAFT
GNP PC --	NAVAL CRAFT CONTROL POINT
GNP PD --	NAVAL CRAFT DEPARTURE POINT
GNP PP --	NAVAL CRAFT PENETRATION POINT
MOA O- --	ANTITANK OBSTACLES: TETRAHEDRONS, DRAGONS TEETH, AND OTHER SIMILAR OBSTACLES
MOA OF --	FIXED AND PREFABRICATED DRAGONS TEETH, AND OTHER SIMILAR OBSTACLES
MOA OM --	MOVEABLE DRAGONS TEETH, AND OTHER SIMILAR OBSTACLES
MOA OP --	MOVEABLE AND PREFABRICATED DRAGONS TEETH, AND OTHER SIMILAR OBSTACLES
MOB -- --	BOOBY TRAP
MOM -- --	MINES
MOM U- --	UNSPECIFIED MINE
MOM T- --	ANTITANK MINE (AT)
MOM D- --	ANTITANK MINE WITH ANTIHANDLING DEVICE
MOM E- --	ANTITANK MINE (DIRECTIONAL)
MOM P- --	ANTIPERSONNEL (AP) MINES
MOM W- --	WIDE AREA MINES
MOF S- --	STATIC DEPICTION
MBC P- --	ENGINEER REGULATING POINT
MSE -- --	EARTHWORK, SMALL TRENCH OR FORTIFICATION
MSF -- --	FORT
MSS -- --	SURFACE SHELTER
MSU -- --	UNDERGROUND SHELTER
MNZ -- --	NUCLEAR DETONATIONS GROUND ZERO

MNF -- --	FALLOUT PRODUCING
MNE -- --	RELEASE EVENTS
MND -- --	DECONTAMINATION (DECON) POINTS
MND P- --	DECON SITE/POINT (UNSPECIFIED)
MND A- --	ALTERNATE DECON SITE/POINT (UNSPECIFIED)
MND T- --	DECON SITE/POINT (TROOPS)
MND E- --	DECON SITE/POINT (EQUIPMENT)
MND B- --	DECON SITE/POINT (EQUIPMENT AND TROOPS)
MND O- --	DECON SITE/POINT (OPERATIONAL DECONTAMINATION)
MND D- --	DECON SITE/POINT (THOROUGH DECONTAMINATION)
FPT S- --	POINT/SINGLE TARGET
FPT N- --	NUCLEAR TARGET
FPS -- --	FIRE SUPPORT STATION
SP- -- --	SUPPORT POINTS
SPX -- --	AMBULANCE EXCHANGE POINT
SPC -- --	CANNIBALIZATION POINT
SPY -- --	CASUALTY COLLECTION POINT
SPT -- --	CIVILIAN COLLECTION POINT
SPD -- --	DETAINEE COLLECTION POINT
SPE -- --	ENEMY PRISONER OF WAR (EPW) COLLECTION POINT
SPL -- --	LOGISTICS RELEASE POINT (LRP)
SPM -- --	MAINTENANCE COLLECTION POINT
SPR -- --	REARM, REFUEL AND RESUPPLY POINT
SPU -- --	REFUEL ON THE MOVE (ROM) POINT
SPO -- --	TRAFFIC CONTROL POST (TCP)
SPI -- --	TRAILER TRANSFER POINT
SPN -- --	UNIT MAINTENANCE COLLECTION POINT (UMCP)
SPS -- --	SUPPLY POINTS
SPS Z- --	GENERAL SUPPLY POINT
SPS A- --	CLASS I SUPPLY POINT
SPS B- --	CLASS II SUPPLY POINT
SPS C- --	CLASS III SUPPLY POINT
SPS D- --	CLASS IV SUPPLY POINT
SPS E- --	CLASS V SUPPLY POINT
SPS F- --	CLASS VI SUPPLY POINT
SPS G- --	CLASS VII SUPPLY POINT
SPS H- --	CLASS VIII SUPPLY POINT
SPS I- --	CLASS IX SUPPLY POINT
SPS J- --	CLASS X SUPPLY POINT
SPA -- --	AMMUNITION POINTS
SPA S- --	AMMUNITION SUPPLY POINT (ASP)

SPA T- --	AMMUNITION TRANSFER POINT (ATP)
OE- -- --	EMERGENCY
OED -- --	DITCHED AIRCRAFT
OEP -- --	PERSON IN WATER
OEV -- --	DISTRESSED VESSEL
OHM -- --	SEA MINE-LIKE
OHI -- --	ICEBERG
OHO -- --	OIL RIG
OS- -- --	SEA SUBSURFACE RETURNS
OSB -- --	BOTTOM RETURN/NOMBO
OSB M- --	INSTALLATION/MANMADE
OSB N- --	SEABED ROCK/STONE, OBSTACLE, OTHER
OSB W- --	WRECK
OSM -- --	MARINE LIFE
OF- -- --	FIX
OFA -- --	ACOUSTIC FIX
OFE -- --	ELECTRO-MAGNETIC FIX
OFO -- --	ELECTRO-OPTICAL FIX

4 Line

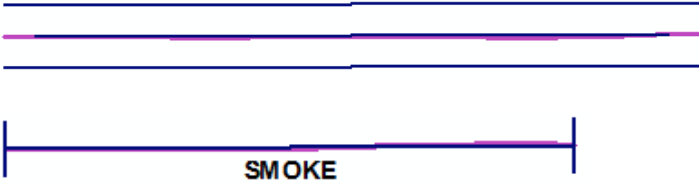|	
Number of points	2 or more
Symbols	Linear routes, control lines, obstacle lines
Anchor position	Start and end of each line segment, with point 1 representing the initial point of the sketched gesture, and each consecutive point representing a "hinge"/inflection point or the last point A high sampling rate is applied to provide means for the users to specify in detail the placement of the symbol For symbols that have a direction, the arrow is placed at the last point
Stroke gesture	Line trace

Point order	Points are presented in the order they were sketched, starting with the one at the beginning of the stroke and moving towards the final point
Examples (stroke shown in orange-purple)	

Representative symbols

SIC Fragment	Comment
GGL -- --	MANOUVER LINES
GGL R- --	ROUTE
GGL B- --	BOUNDARIES
GGL F- --	FORWARD LINE OF OWN TROOPS (FLOT)
GGL C- --	LINE OF CONTACT
GGL P- --	PHASE LINE
GGL L- --	LIGHT LINE
GPM -- --	DECOY MINED AREA
GPY -- --	DECOY MINED AREA, FENCED
GPN -- --	DUMMY MINEFIELD (STATIC) TODO
GPC -- --	DUMMY MINEFIELD (DYNAMIC) TODO
GDL -- --	LINES
GDL P- --	PRINCIPAL DIRECTION OF FIRE (PDF)
GOL -- --	OFFENSE LINES
GOL F- --	FINAL COORDINATION LINE
GOL I- --	INFILTRATION LINE
GOL L- --	LIMIT OF ADVANCE
GOL T- --	LINE OF DEPARTURE
GOL C- --	LINE OF DEPARTURE/LINE OF CONTACT (LD/LC) todo
GOL P- --	PROBABLE LINE OF DEPLOYMENT (PLD)
GSL -- --	SPECIAL LINE
GSL H- --	HOLDING LINE
GSL R- --	RELEASE LINE
GNL -- --	NAVAL LINE

GNL B- --	NAVAL BEACH
MOG L- --	OBSTACLE LINE
MOS -- --	ABATIS
MOA D- --	ANTITANK DITCH
MOA DU --	ANTITANK DITCH UNDER CONSTRUCTION
MOA DC --	ANTITANK DITCH COMPLETE
MOA R- --	ANTITANK DITCH REINFORCED WITH ANTITANK MINES
MOA W- --	ANTITANK WALL
MOW -- --	WIRE OBSTACLE
MOW U- --	FENCE OBSTACLE
MOW S- --	SINGLE FENCE BARBED WIRE
MOW D- --	DOUBLE FENCE BARBED WIRE
MOW A- --	DOUBLE APRON FENCE
MOW L- --	LOW WIRE FENCE
MOW H- --	HIGH WIRE FENCE
MOW C- --	CONCERTINA
MOW CS --	SINGLE CONCERTINA
MOW CD --	DOUBLE STRAND CONCERTINA
MOW CT --	TRIPLE STRAND CONCERTINA
MSL -- --	FORTIFIED LINE
FLC F- --	FIRE SUPPORT COORDINATION LINE (FSCL)
FLC C- --	COORDINATED FIRE LINE (CFL)
FLN -- --	NO-FIRE LINE (NFL)
FLR -- --	RESTRICTIVE FIRE LINE (RFL)
SL- -- --	SUPPLY LINES
SLR -- --	SUPPLY ROUTES
SLR M- --	MAIN SUPPLY ROUTE
SLR A- --	ALTERNATE SUPPLY ROUTE
SLR O- --	ONE-WAY TRAFFIC
SLR T- --	ALTERNATING TRAFFIC
SLR W- --	TWO-WAY TRAFFIC
OHN -- --	NAVIGATIONAL HAZARD
OB- -- --	BEARING LINE
OBE -- --	ELECTRONIC BEARING
OBA -- --	ACOUSTIC BEARING
OBT -- --	TORPEDO BEARING
OBO -- --	ELECTRO-OPTICAL INTERCEPT

5 StraightLine

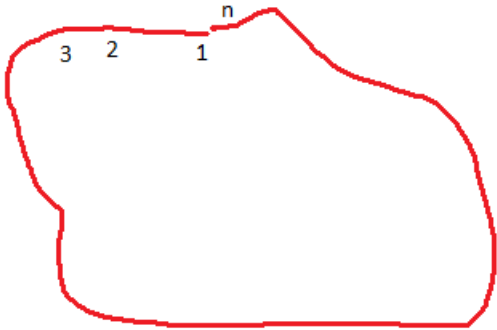| Number of points	2
Symbols	Single segment line symbols
Anchor position	Start and end of (straight) line segment. "Hinges"/inflection points are ignored. The line segment represents the axis of the symbol, either in the middle (e.g. of a corridor) or defining the position of single-line symbols For symbols that have a direction, the arrow corresponds to the last point
Stroke gesture	Single line segment
Point order	Starting point followed by the end point
Examples (stroke shown in orange-purple)	

Representative symbols

SIC Fragment	Comment
GAL C- --	AIR CORRIDOR
GAL M- --	MINIMUM RISK ROUTE (MRR)
GAL S- --	STANDARD-USE ARMY AIRCRAFT FLIGHT ROUTE (SAAFR)
GAL U- --	UNMANNED AERIAL VEHICLE (UAV) ROUTE
GAL L- --	LOW LEVEL TRANSIT ROUTE (LLTR)
GDL F- --	FORWARD EDGE OF BATTLE AREA (FEBA)
MBC L- --	LANE
FLT -- --	LINEAR TARGET
FLT F- --	FINAL PROTECTIVE FIRE (FPF)
FLT S- --	LINEAR SMOKE TARGET

SLC -- --	CONVOYS
SLC M- --	MOVING CONVOY
SLC H- --	HALTED CONVOY

6 Area

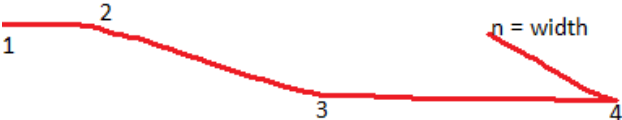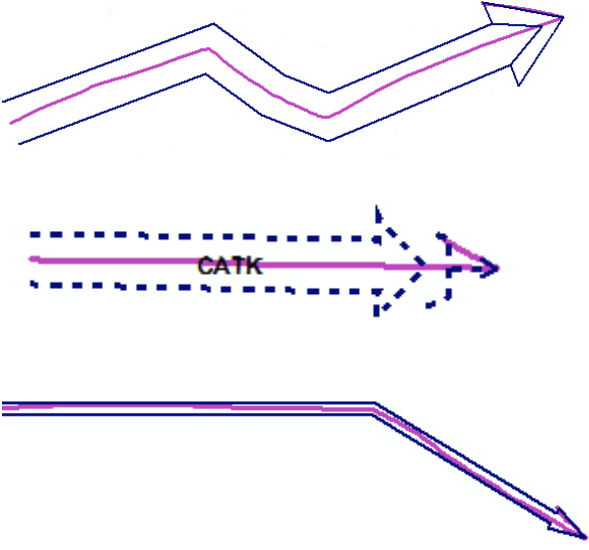| Number of points	3 or more
Symbols	Potentially irregular, closed zones, areas or regions
Anchor position	Start and end of each line segment enclosing the area, with point 1 representing the initial point of the sketched gesture, and each consecutive point representing a "hinge"/inflection point or the last point. A high sampling rate is applied to provide means for the users to specify in detail the placement of the symbol
Stroke gesture	Traced region boundary
Point order	Points are presented in the order they were sketched, starting with the one at the beginning of the stroke and moving towards the final point. A segment closing the area is established between the last and the first point

Examples (stroke shown in orange-purple)	OBJ
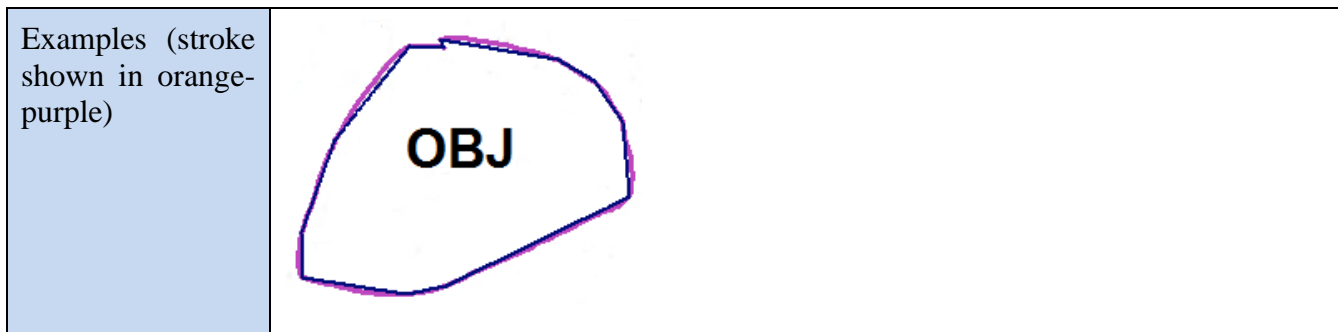
Representative symbols

SIC Fragment	Comment
GGA G- --	GENERAL AREA
GGA A- --	ASSEMBLY AREA
GGA E- --	ENGAGEMENT AREA
GGA F- --	FORTIFIED AREA
GGA D- --	DROP ZONE
GGA X- --	EXTRACTION ZONE (EZ)
GGA L- --	LANDING ZONE (LZ)
GGA P- --	PICKUP ZONE (PZ)
GGA Y- --	LIMITED ACCESS AREA
GGA Z- --	AIRFIELD ZONE
GAA F- --	FORWARD AREA AIR DEFENSE ZONE (FAADEZ)
GAA H- --	HIGH DENSITY AIRSPACE CONTROL ZONE (HIDACZ)
GAA M- --	MISSILE ENGAGEMENT ZONE (MEZ)
GAA W- --	WEAPONS FREE ZONE
GDA BP --	PREPARED BUT NOT OCCUPIED
GDA E- --	ENGAGEMENT AREA
GOA A- --	ASSAULT POSITION
GOA K- --	ATTACK POSITION
GOA P- --	PENETRATION BOX
GSA O- --	AREA OF OPERATIONS (AO)
GSA A- --	AIRHEAD
GSA B- --	BRIDGEHEAD
GSA E- --	ENCIRCLEMENT
GSA N- --	NAMED AREA OF INTEREST (NAI)
GSA T- --	TARGETED AREA OF INTEREST (TAI)
GNA LV --	NAVAL AAV LAUNCH AREA
GNA LC --	NAVAL CRAFT LAUNCH AREA
GNA CZ --	NAVAL CRAFT LANDING ZONE

GNA VZ --	NAVAL VERTICAL LANDING ZONE
MOG B- --	OBSTACLE BELT
MOG Z- --	OBSTACLE ZONE
MOG F- --	OBSTACLE FREE AREA
MOG R- --	OBSTACLE RESTRICTED AREA
MOF D- --	DYNAMIC DEPICTION
MOF A- --	MINED AREA
MOU -- --	UNEXPLODED ORDINANCE AREA (UXO)
MNR -- --	RADIOACTIVE AREA
MNB -- --	BIOLOGICALLY CONTAMINATED AREA
MNC -- --	CHEMICALLY CONTAMINATED AREA
FPT R- --	RECTANGULAR TARGET
FAA -- --	FIRE SUPPORT AREA (FSA)
FAT -- --	AREA TARGET
FAT R- --	RECTANGULAR AREA TARGET
FAT C- --	CIRCULAR TARGET
FAT G- --	FIRE SUPPORT AREA TARGET
FAC AI --	AIRSPACE COORDINATION AREA (ACA)
FAC FI --	IRREGULAR FREE FIRE AREA
FAC NI --	IRREGULAR NO FIRE AREA
FAC RI --	RESTRICTIVE FIRE AREA (RFA)
FAC PR --	RECTANGULAR POSITION AREA FOR ARTILLERY PAA ARTILLERY PFA ARTILLERY POSITION
FAZ II --	IRREGULAR ARTILLERY TARGET INTELLIGENCE INTEL ATI
FAZ XI --	IRREGULAR CALL FOR FIRE CFF
FAZ FI --	FIRE SUPPORT IRREGULAR CRITICAL FRIENDLY ZONE
FAK BC --	CIRCULAR FIRE SUPPORT KILL BOX
FAK BI --	IRREGULAR KILL BOX
FAK BR --	RECTANGULAR KILL BOX
FAK PC --	CIRCULAR KILL BOX
FAK PI --	IRREGULAR KILL BOX
FAK PR --	RECTANGULAR KILL BOX
SAD -- --	DETAINEE HOLDING AREA
SAE -- --	ENEMY PRISONER OF WAR (EPW) HOLDING AREA
SAR -- --	FORWARD ARMING AND REFUELING AREA (FARP)
SAH -- --	REFUGEE HOLDING AREA
SAS B- --	BRIGADE (BSA)
SAS D- --	DIVISION (DSA)
SAS R- --	REGIMENTAL (RSA)

7 ArrowFat

Number of points	3 or more
Symbols	Axis of advance, where width is a required component
Anchor points	Start and end of each line segment, with point 1 representing the initial point of the sketched gesture, and each consecutive point representing a "hinge"/inflection point or the last point The "barb" (last inflection of the harpoon) determines the width of the axis A low sampling rate is applied, resulting in simplified line segments along the axis The arrow direction is given by the last point
Stroked gesture	"Harpoon": traced line with a barb determining width
Point order	Points are presented in the order they were sketched, starting with the one at the beginning of the stroke and moving towards the final point. The very last point provides the width
Examples (stroke shown in orange-purple)	

Representative symbols

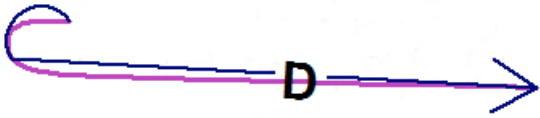| SIC Fragment	Comment
TK- -- --	COUNTERATTACK (CATK)
TKF -- --	COUNTERATTACK BY FIRE
GOL AV --	FRIENDLY AVIATION AXIS OF ADVANCE
GOL AA --	FRIENDLY AIRBORNE AXIS OF ADVANCE
GOL AR --	FRIENDLY ATTACK, ROTARY WING AXIS OF ADVANCE
GOL AG M-	MAIN ATTACK AXIS OF ADVANCE
GOL AG S-	SUPPORTING ATTACK AXIS OF ADVANCE

8 ArrowThin

Number of points	2
Symbols	Single segment line symbols
Anchor position	Start and end of (straight) line segment. "Hinges"/inflection points are ignored. The line segment represents the axis of the symbol, with the arrow direction given by the last point
Stroke gesture	Single line segment
Point order	Starting point followed by the end point
Examples (stroke shown in orange-purple)	

Representative symbols

SIC Fragment	Comment
TA- -- --	; FOLLOW AND ASSUME

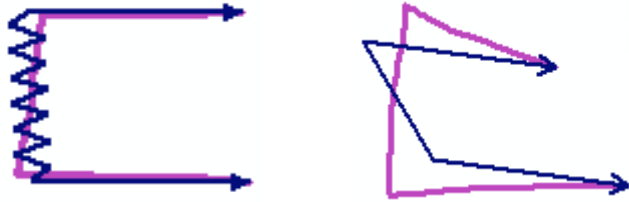| TAS -- --	; FOLLOW AND SUPPORT
GOL K- --	; DIRECTION OF ATTACK (no graphic at this level)
GOL KA --	; DIRECTION OF AVIATION ATTACK
GOL KG --	; DIRECTION OF GROUND ATTACK
GOL KG M-	; DIRECTION OF MAIN ATTACK
GOL KG S-	; DIRECTION OF SUPPORTING ATTACK
MOE F- --	; FIX

9 Hook

Number of points	3
Symbols	Symbols that include a "hook"-like bend
Anchor position	Start and end of (straight) line segment. Inflection points are ignored, except for the initial bend. The line segment represents the axis of the symbol, either in the middle (e.g. of a corridor) or coinciding with the position of single line symbols For symbols that have a direction, the arrow corresponds to the last point
Stroked gesture	"Hook": bend, followed by a single straight line segment
Point order	Point at the beginning and at the end of the segment after the bend, followed by the first point (tip of the bend)
Examples (stroke shown in orange-purple)	

Representative symbols

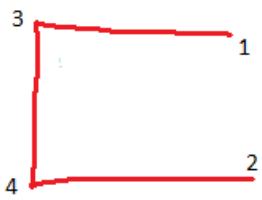| SIC Fragment	Comment
TL- -- --	DELAY
TW- -- --	WITHDRAW

10 UbendThreePoints

Number of points	3
Symbols	Symbols with three anchor points, defined by a base and two parallel lines of same length
Anchor position	The start and end points of the stroke determine the position of parallel lines. The single point in the middle of the bottom of the "U" shape determines the length applied to both lines
Stroked gesture	Squarish "U"-like shape
Point order	Point at the start of the stroke, followed by the one at the end, and then a single point in the middle of the (closed) bottom of the "U"
Examples (stroke shown in orange-purple)	

Representative symbols

SIC Fragment	Comment
TH- -- --	BREACH

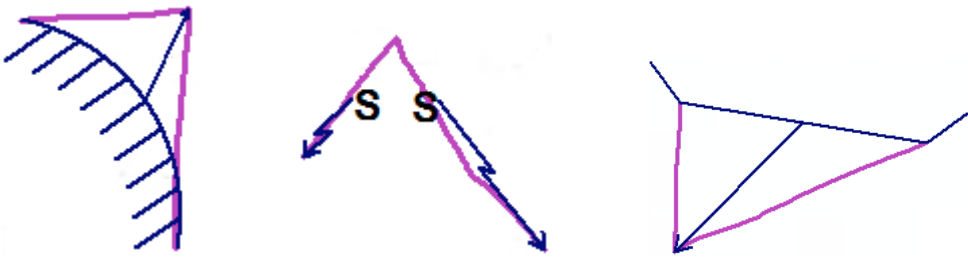|	
TY- -- --	BYPASS
TC- -- --	CANALIZE
TX- -- --	CLEAR
TJ- -- --	CONTAIN
MB- -- --	OBSTACLE BYPASS
MBD -- --	OBSTACLE BYPASS DIFFICULTY
MBD E- --	BYPASS EASY
MBD D- --	BYPASS DIFFICULT
MBD I- --	BYPASS IMPOSSIBLE

11 Ubend

Number of points	4
Symbols	Similar to UBendThreePoint symbols, but with lines that are not required to be parallel, and can take different angles and have different lengths
Anchor position	The base of the "U" aligns with the bottom of the symbol, and define its width. The sides determine the angle and length of outgoing lines or arrows. Each side can have a different angle and length
Stroked gesture	Squarish "U"-like shape
Point order	Point at the start of the stroke, followed by the one at the end, and then each of the "corners" at the bottom of the "U"
Examples (stroke shown in orange-purple)	

Representative symbols

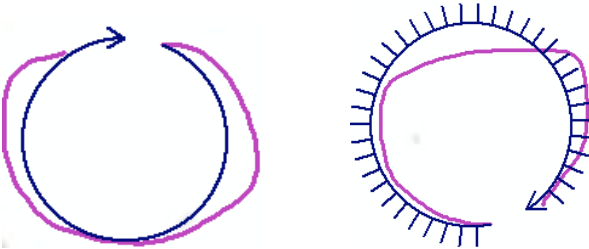| SIC Fragment	Comment
GOA S- --	SUPPORT BY FIRE POSITION

12 Vee

Number of points	3
Symbols	Symbols that a) indicate coverage by two angled arrows, such as Screen, Guard and Cover, or 2) those that are composed by a base line plus an arrow, such as Ambush and Attack by Fire Position
Anchor position	For symbols of type a), the sides of the "V" define the angle and length of the arrows that define the coverage. Type b) symbols are defined by a line that connects the start and end points, with an arrow projecting from this line to the vertex of the "V"
Stroked gesture	"V"-like shape
Point order	Ther vertex (bottom of the "V"), followed by the start point and the end point of the stroke
Examples (stroke shown in orange-purple)	

Representative symbols

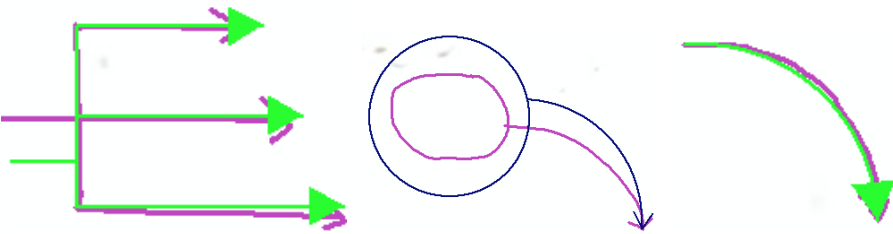| SIC Fragment	Comment
TU- -- --	SECURITY
TUS -- --	SCREEN
TUG -- --	GUARD
TUC -- --	COVER
GGA S- --	SEARCH AREA/RECONNAISSANCE AREA
GOA F- --	ATTACK BY FIRE POSITION
GSL A- --	AMBUSH

13 Open Circle

Number of points	2
Symbols	Circular symbols
Anchor position	Center of the circle and beginning of the arc
Stroked gesture	(Open) oval/circular stroke, drawn clockwise
Point order	Center point, followed by the start point
Examples (stroke shown in orange-purple)	

Representative symbols

SIC Fragment	Comment
TE- -- --	ISOLATE
TO- -- --	OCCUPY
TQ- -- --	RETAIN
TS- -- --	SECURE

14 Other Multipoint symbols

Number of points	Depends on the symbol
Symbols	Symbols with anchor points that do not fit the shapes definable by the generic stroke classes described in the document
Represent	Various points that depend on the specific symbol. See the MIL-STD-2525C/D symbol Draw Rules for details.
Stroked gesture	Requires multiple strokes
Examples (stroke shown in orange-purple)	

Representative symbols

SIC Fragment	Comment
TB- -- --	BLOCK
TT- -- --	DISRUPT
TI- -- --	INTERDICT
TP- -- --	PENETRATE
TR- -- --	RELIEF IN PLACE (RIP)
TM- -- --	RETIREMENT

TZ- -- --	SEIZE
GPD -- --	DUMMY (DECEPTION/DECOY)
GPA -- --	AXIS OF ADVANCE FOR FEINT
GPF -- --	DIRECTION OF ATTACK FOR FEINT
MOM C- --	MINE CLUSTER
MOF G- --	GAP
MOE B- --	BLOCK
MOE T- --	TURN
MOE D- --	DISRUPT
MOR -- --	ROADBLOCKS, CRATERS, AND BLOWN BRIDGES
MOR P- --	PLANNED ROADBLOCKS, CRATERS, AND BLOWN BRIDGES
MOR S- --	EXPLOSIVES, STATE OF READINESS 1 (SAFE)
MOR A- --	EXPLOSIVES, STATE OF READINESS 2 (ARMED-BUT-PASSABLE)
MOR C- --	ROADBLOCK COMPLETE (EXECUTED)
MOT -- --	TRIP WIRE
MBC A- --	ASSAULT CROSSING AREA
MBC B- --	BRIDGE OR GAP
MBC F- --	FERRY
MBC E- --	FORD EASY
MBC D- --	FORD DIFFICULT
MBC R- --	RAFT SITE
MSW -- --	FOXHOLE, EMPLACEMENT OR WEAPON SITE