

Smart Name
Placement and
Symbol Making
for Maps



MaplexTM

Automatic
Cartographic
Name
Placement
Software

Maplex™

Accomplish Name Placement Tasks Quicker and Easier than Ever Before

As a cartographer, you know that one of the most time-consuming aspects of map production is name placement. You've spent hours on manual intervention to prevent name overlap and ambiguous feature annotation. And you've agonized over last-minute minor changes to your map specification that result in a need for readjustment of text positions. These are just a few of the challenges encountered by today's cartographers.

Maplex™ automatic cartographic name placement software from ESRI, the makers of the industry-standard ARC/INFO® geographic information system (GIS) software, faces these challenges head-on. From its intuitive graphical user interface to its conflict resolution capabilities, Maplex makes it easier to create labels and symbols for map features.

Data Input

Maplex can place point, line, and area labels automatically on a fully symbolized map according to user-specified rules. Highly flexible, Maplex lets you control the configuration of all name classes on your map. The wide range of control options offered by Maplex are easily accessible via a straightforward graphical user interface.

Maplex reads input data from a variety of file formats including ESRI® shapefile format (.shp), Laser-Scan™ Internal Feature Format (IFF), Ordnance Survey® National Transfer Format (NTF), Ordnance Survey™ User Transfer Format (UTF), MAPDATA™ format (MAP), Maplex Features and Labels Format (MFL), and Maplex Placed Labels (MPL).

Data Output

Maplex helps create fully symbolized cartographic products on your computer screen and output hard copy to standard printing devices. Maplex produces a variety of output files including Adobe® Illustrator® Version 5.0, Macromedia® FreeHand® Versions 5.0 and 3.0, Adobe PostScript® (encapsulated level 1), Intergraph® Design Format (.dgn), Laser-Scan Internal Feature Format, Autodesk® Drawing Exchange Format (DXF™), MAPDATA Format, and Maplex Placed Labels Format.

Labels output in MPL format can be fed back into Maplex as prepositioned labels that are immovable during Maplex software's next processing run.



Labels

Maplex gives you unprecedented flexibility in creating labels. For any map, you can select from up to 96 typefaces. Maplex supports extended character sets of up to 512 characters, allowing you to make maps using most national alphabets. Transformations that can be applied to labels as they are read into Maplex include case conversion, stripping numeric or alphabetic characters from the label, abbreviation, translation, and selection of one or more parts of a label.

Symbolization

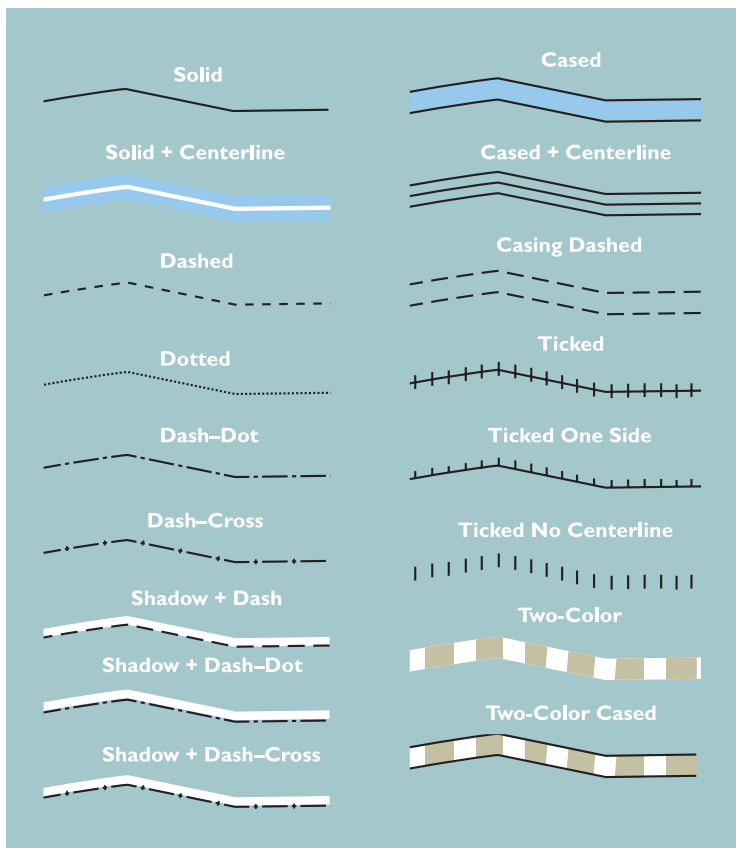
With Maplex, you fully control the symbolization of map features. Maplex enables you to produce fully symbolized maps directly from digital cartographic data.

Using Maplex you can

- Generate cased road outlines for use in atlases.
- Treat each character on your map individually, defining height, width, and intercharacter spacing.
- Mask out underlying map features and enclose straight text with unique boxes.

The built-in symbol styles available in various orientations for point features are circle, rectangle, diamond, star, cross, quadrilateral, and triangle. You can also import externally designed point symbols as Adobe Illustrator format files.

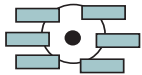
Numerous symbol styles are available for line features. Area feature symbol styles can be cased, not cased, dashed casing, dotted casing, or dash-dot casing. Symbol colors can be selected from a palette of 64 user-defined colors and specified either graphically or numerically in RGB, HLS, or CMYK formats. User-defined symbols can have unlimited colors.



The symbol styles available for line features (including streets) are shown in the above diagram.



Centered Horizontal



Offset Horizontal



Offset West Horizontal



Offset South Horizontal



Offset East Horizontal



Offset North Horizontal

Conflict Resolution

Maplex helps resolve conflicts between name placements. Depending on the relative importance of cartographic quality and execution speed, you can specify the relative priority of names and request selective automatic name detection to ensure no overlapping exists.

Label Positioning

Maplex can place labels centered on or offset from a point feature. If a label is offset, you can specify an alternative offset to be used if the preferred offset causes overlap. Maplex can also fix labels at one of the cardinal positions around a point. Graticule alignment also lets you place your labels so they are aligned with the lines of latitude on your map for small-scale applications such as atlases.

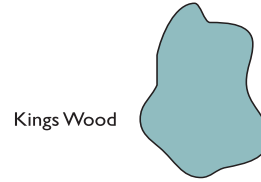
Maplex can place line feature labels either horizontally or along the line. You can specify a minimum distance between labels along a line. When lines having the same symbology cross one another, Maplex can repeat their labels to reduce ambiguity.



Centered Horizontal



Centered Straight



Offset Horizontal



Centered Curved



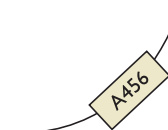
Centered Horizontal



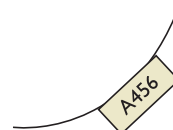
Shifted Horizontal



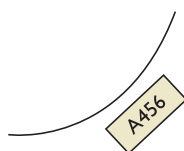
Offset Horizontal



Centered Straight



Shifted Straight



Offset Straight



Centered Curved



Shifted Curved



Offset Curved

Maplex can label a network of streets as cased lines. Maplex even includes several strategies for coping with the common problem of street names that are too long for the street length: names can be double-banked, words can be abbreviated, and the font can be condensed or its size reduced.

Maplex gives you a choice of area labeling styles—centered horizontal, centered straight, centered curved, and offset. You can choose one style or specify more than one and let Maplex choose the best style for each particular feature.

Supported Platform

Pentium® PC, Windows NT®

Feature Projection

The projections supported by Maplex are listed in the following table.

Supported Projections

Airy	Laborde	Putnins P2
Aitoff	Lagrange	Putnins P3
Albers Equal Area	Lambert Azimuthal Equal Area	Putnins P3'
Apian Globular I	Lambert Conformal Conic	Putnins P4'
August Epicycloidal	Lambert Equal Area Conic	Putnins P5
Azimuthal Equidistant	Larrivee	Putnins P5'
Bacon Globular	Laskowski	Putnins P6
Bipolar Conic of Western Hemisphere	Lee Oblated Stereographic	Putnins P6'
Boggs Eumorphic	Loximuthal	Quartic Authalic
Bonne (Werner lat_ l=90)	McBride-Thomas Flat-Polar Parabolic	Rectangular Polyconic
Cassini	McBride-Thomas Flat-Polar Quartic	Robinson
Central Cylindrical	McBryde-Thomas Flat-Polar Sine (No. 1)	Sinusoidal (Sanson-Flamsteed)
Chamberlin Trimetric	McBryde-Thomas Flat-Pole Sine (No. 2)	Space Oblique for LANDSAT
Collignon	McBride-Thomas Flat-Polar Sinusoidal	Stereographic
Craster Parabolic (Putnins P4)	Mercator	Tilted Perspective
Denoyer Semi-Elliptical	Miller Cylindrical	Tissot
Eckert I	Miller Oblated Stereographic	Transverse Central Cylindrical
Eckert II	Modified Polyconic	Transverse Cylindrical Equal Area
Eckert III	Mod. Stereographics of Alaska	Transverse Mercator
Eckert IV	Mod. Stereographics of 48 U.S.	Two Point Equidistant
Eckert V	Mod. Stereographics of 50 U.S.	Universal Polar Stereographic
Eckert VI	Mollweide	Universal Transverse Mercator (UTM)
Equidistant Conic	Murdoch I	Urmaev Flat-Polar Sinusoidal
Equidistant Cylindrical (Plate Carree)	Murdoch II	Urmaev V
Euler	Murdoch III	van der Grinten I
Fahey	Near-sided Perspective	van der Grinten II
Foucaut	Nell	van der Grinten III
Foucaut Sinusoidal	Nell-Hammer	van der Grinten IV
Gall (Gall Stereographic)	New Zealand Map Grid	Vitkovsky I
General Oblique Transformation	Nicolosi Globular	Wagner I (Kavraysky VI)
General Sinusoidal Series	Oblated Equal Area	Wagner II
Ginsburg VIII (TsNIIGAiK)	Oblique Cylindrical Equal Area	Wagner III
Gnomonic	Oblique Mercator	Wagner IV
Goode Homolosine	Ortelius Oval	Wagner V
Hammer & Eckert-Greifendorff	Orthographic	Wagner VI
Hatano Asymmetrical Equal Area	Perspective Conic	Wagner VII
International Map of the World	Polyconic	Werenskiold I
Kavraysky V	Polyconic (American)	Winkel I
Kavraysky VII	Putnins P1	Winkel II
		Winkel Tripel



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