Consider inherent relevance of placement

Intended order of consumption

Identify fundamental meaning or message

Priority of topics

Flow between topics

Chronology of nodes

Industry, discipline, cultural, or societal convention

Familiar physical or metaphorical placement

Consider key concepts or relationships

Consider guiding with placement

Consider domain specific meaning of placement

Consider native range of values

Consider inherent relevance of placement

Possible axes

Design choices should reflect communication goals

Design choices should reflect context and audience

Node placement should reflect location or significance of node referent

Different Goals Require Different Methods

Audience Brings Context

Semantic Distance

Fundamental Principle

Design Principle

Design Consideration

Domain examples and suggestions

Specific examples

Very specific examples

Chronology

Hierarchy

Causality

Key interaction

Quantity

Parallels

Range

Guidance for Axis Selection

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Design choices should reflect context and audience.

Node placement should reflect location or significance of node referent.

Consider domain specific meaning of placement.

Consider inherent relevance of placement.

Semantic Distance

Audience Brings Context

Industry, discipline, cultural, or societal convention

Familiar physical or metaphorical placement

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What they will do with the information

Identify fundamental meaning or message

Consider including a wide variety of types of information

More detail can be useful

More detail can be confusing

Consider key concepts or relationships

What they will do with the information

Time they have to absorb information

Amount of information they need

Consider audience motivation and goals

Audience Bring Context

Design choices should reflect context and audience

Different Goals require Different Methods

Design choices should reflect communication goals

Fundamental Principle

Design Principle

Domain examples and suggestions

Possible nodes

Noun

Verb

Relationship

Information Availability

Present only as much information as is necessary

Guidance for Node Selection

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Guidance for Node Encoding and Placement

Audience Brings Context
Design choices should reflect context and audience

Semantic Distance
Node placement should reflect location or significance of node referent

Information Availability
Present only as much information as is necessary

Informative Changes
Patterns should be established and adhered to

Audience knowledge and background
Familiar physical or metaphorical placement

Industry, discipline, cultural, or societal convention

Nodes that are closely related should be close together or similarly placed
Nodes that are not closely related should not be close or not be similarly placed

Labels may be used to make meanings explicit
Information may be redundantly encoded to facilitate decoding

Placement order should be meaningful
Placement order should be consistent

Things that are the same should look the same
Things that are different should look different

Preserve order when using lists or sets

Related element types should be visually similar
Elements shall be visually consistent within a given type

All element types shall be visually distinct at the pre-attentive level
Single properties should be used to show change along only one axis

Contact implies relationship or continuity
Proximity implies similarity or relationship
Overlap implies degrees of similarity and difference

Enclosing means hierarchy
Academic background
Bias regarding your topic
Languages spoken
Cultural background

Green for money, red for blood, black for oil
Green for go, red for stop
Larger nodes or fonts are more important
Smaller nodes or fonts are less important
Heavier lines or fonts are more important
Lighter lines or fonts are less important

Color
Location
Fill pattern
Border
Size
Font
Weight
Smooth
Rough
Iconic
Planet
Rectilinear
Person
Rounded

Preserve order when using lists or sets

Shape

Guidance for Node Encoding and Placement
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**Fundamental Principle**

- Design Principle

**Different Goals require Different Methods**

- Design choices should reflect communication goals

**Audience Brings Context**

- Design choices should reflect context and audience

**Information Availability**

- Present only as much information as is necessary

**Identify fundamental meaning or message**

- Consider including a wide variety of types of information

**Intended order of consumption**

- Flow between topics

**Consider guiding with links**

- Audience motivation and goals

**Links should be used when relationships are not revealed in other ways**

- Links may be omitted when relationships are revealed in other ways

**More detail can be useful**

- More detail can be confusing

**Domain examples and suggestions**

- Specific examples

**Consider key concepts or relationships**

- Verb

**Possible links**

- Implication
- Opposition
- Similarity

**Hierarchy**

- Chronology
- Causality
- Parallels
- Conditional
- Supports
- Opposes
- Affects

**Guidance for Link Selection**

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Audience Brings Context

Industry, discipline, cultural, or societal convention

More detail can be confusing

More detail can be useful

Information may be redundantly encoded to facilitate decoding

Labels may be used to make meanings explicit

Links should be used when relationships are not revealed in other ways

Links may be omitted when relationships are revealed in other ways

Things that are the same should look the same

Things that are different should look different

Links may be identified by a key

Links may be labeled

More detail can be confusing

Information Availability

Present only as much information as is necessary

Information may be redundantly encoded to facilitate decoding

Labels may be used to make meanings explicit

Links should be used when relationships are not revealed in other ways

Links may be omitted when relationships are revealed in other ways

Things that are the same should look the same

Things that are different should look different

More detail can be useful

Related element types should be visually similar

Elements shall be visually consistent within a given type

Single properties should be used to show change along only one axis

All element types shall be visually distinct at the pre-attentive level

Link style

Solid or broken line

Line weight

Line taper

Label font

Straight or curved lines

Single or forked end

Orthogonal or diagonal lines

Arrow style or size

Line or arrow color

Patterns should be established and adhered to

Informative Changes

Guidance for Link Encoding and Placement

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