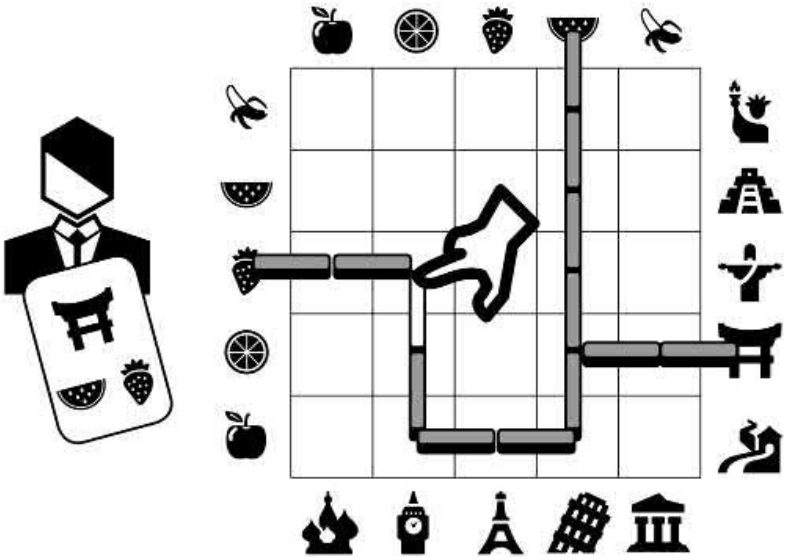
SET-04 Network Building



Description

Network Building is a specialized kind of set collection in which the sets collected represent ties between nodes, often represented as routes between destinations.

Discussion

Earlier in this chapter, we discussed *Ticket to Ride* as having a basic *Rummy*-like set-collection mechanism that allows players to build routes in specific places based on the color and number of train cards they collected. But there's another dimension, another kind of set that players collect in *Ticket to Ride*: the eponymous tickets themselves. A ticket can be satisfied by an enormous number of possible route combinations, or sets, that connect the two cities listed. The tickets represent a set of sets, or a super-set, a kind of telescoping set of set-collection mechanisms. *Brass* offers a similar concept in that not only are players seeking to connect certain cities but also they are seeking to ensure the availability of certain raw materials within the network created.

Considering sets in this way illuminates the issue of set element exclusivity. While some games require each set element to be part of only one set (as in *SET*, the pattern recognition game), route-building games typically make

routes permanent and allow those routes to be reused as part of other sets or to be subsumed entirely into a larger set. The visual representation of the set as nodes and ties makes it really easy for players to understand why this mechanism works the way it does.

Route-building games have many other elements to them beyond set collection. Blocking other players, dealing with different types of terrain, and upgrading the vehicles that run on these routes are just a few of these elements. We will look at a few of those next. Yet, underneath all of that is the core notion that by linking together a few nodes into a contiguous relationship, you create a whole that is more valuable than the sum of its parts (Illustration 12.4).

There are several options available to the designer in terms of how the network is created. The three most commonly used are *Point-to-Point*, *Tile*

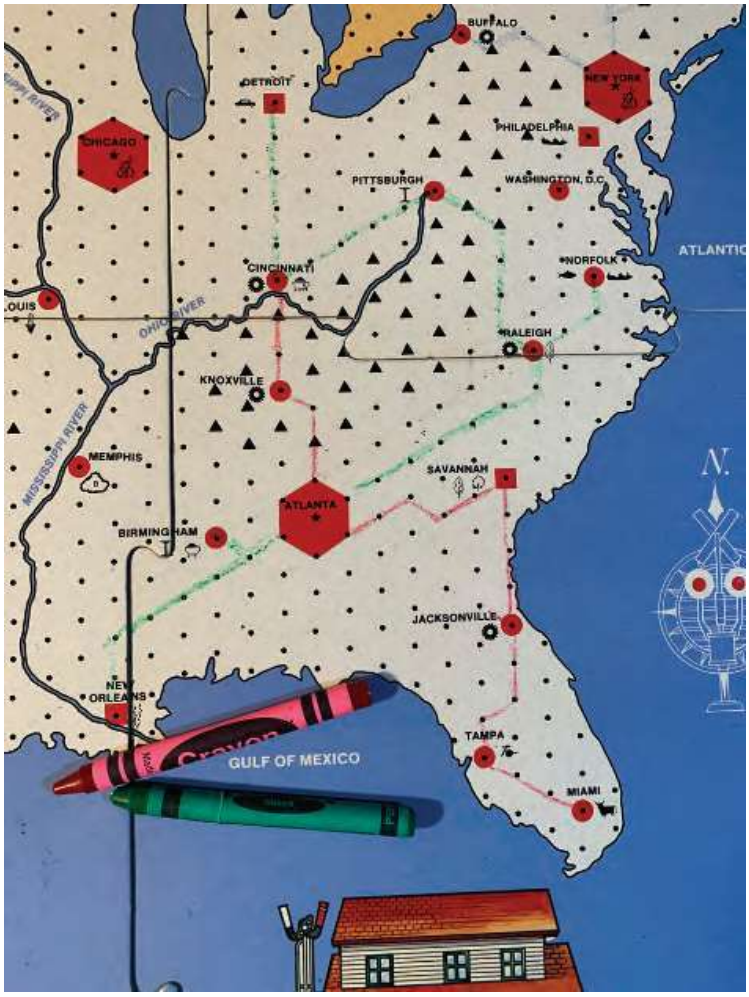


Illustration 12.4 Routes are drawn on the board with a crayon in *Empire Builder*. Each segment costs a different amount depending on the terrain that is being connected.

Placement, and *Existing Network*. In a *Point-to-Point* system, the map is a regular grid of dots or connections, and players may connect any two adjacent dots. Examples of this are *Empire Builder*, where the connections are drawn with markers on a dry-erase surface, and *Transamerica*, where players place wooden sticks to connect dots, similar to roads in *Catan*. Point-to-Point connections can either be owned by a particular player (*Empire Builder*, *Catan*) or be neutral and usable by all (*TransAmerica*).

In *Tile Placement* systems, players place (typically) square or hexagonal tiles onto a grid to form connections. *Streetcar* and *Tsuro* use square tiles, while *Age of Steam* and *1830* use hexagons. The requirement to form connections as tiles are placed can act as constraints on which tiles may be placed, as in Tile-Laying (SET-02), as edges need to match up. Tile Placement games allow for more complex tiles, including connections that go under or over each other, or branch off. It also allows for Upgrade systems (ECO-11), where tiles are replaced with more complex or valuable tiles. This is particularly used in rail games like *1830*.

The boards in *Existing Network* systems have the routes already printed on them. Players need to claim, construct, or activate them in some way. For example, in *Ticket To Ride*, all the possible rail lines are on the map but need to be claimed by players through the playing of sets of cars. In *Rail Baron* and *Power Grid*, players pay to control connections.

Point-to-Point systems work well when there are a lot of possible connections players may want to make. The random cities that need to be connected in *TransAmerica* or the wide variety of pick-up-and-deliver locations in *Empire Builder* make them well suited to give players ultimate flexibility on how to build their network. However, if there are stereotypical connections that are always made, an Existing Network system may work better. In *Power Grid*'s original incarnation as *Funkenshlag*, players drew power lines on the board with markers. However, build patterns were pretty standard, so when the game was released again, the switch was made to an Existing Network system, which earned a much better reception by players.

Network-Building mechanisms tend to dominate gameplay. Most games that use them do so as a centerpiece of the design. However, there are some games where the network construction is a sideshow in the main game. One example is the investigative game *Android*, where players may make connections between entities on a separate Conspiracy board which can give bonuses and impact victory points.

Because of the tactile nature of building networks, a variety of other physical media have been used besides those mentioned. Some examples

include *Twixt*, which uses an ingenious peg-and-link system, *String Railway*, where players lay the string on the table to represent rail lines, and *Paperclip Railways*, which does something similar with paper clips, except that clips can be added to chains to represent additional rails being built.

Sample Games

Point-to-Point

Catan (Teuber, 1995)
Empire Builder (Bromley and Fawcett, 1982)
Paperclip Railways (Boydell, 2011)
String Railway (Hayashi, 2009)
TransAmerica (Delonge, 2001)
Twixt (Randolph, 1962)

Tile Placement

1830 (Tresham, 1986)
Age of Steam (Wallace, 2002)
Android (Clark and Wilson, 2008)
Streetcar (Dorra, 1995)
Tsuro (McMurchie, 2004)

Existing Network

Brass (Wallace, 2007)
Concordia (Gerdts, 2013)
Hansa Teutonica (Steding, 2009)
Power Grid (Friese, 2004)
Rail Baron (Erickson and Erickson, 1977)
Ticket to Ride (Moon, 2004)