

# Territory Design



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# Territory Design

## An Esri White Paper

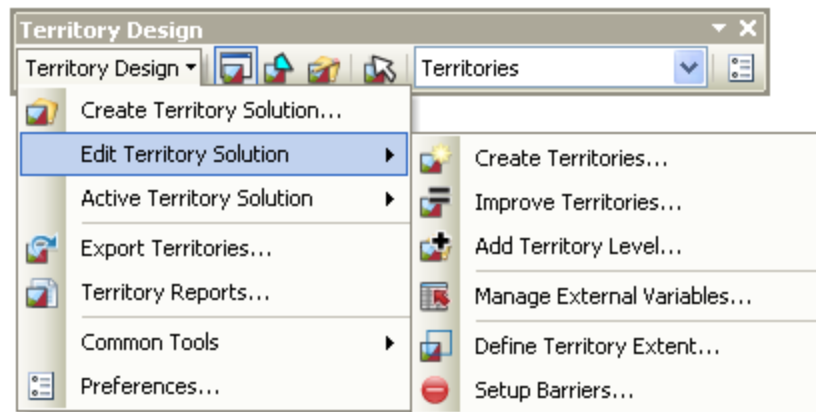
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# Territory Design

## Introduction

Territory Design is a desktop solution bundled with Esri® Business Analyst™ to help business professionals create, automatically balance, and maintain territories. The guided, intuitive, wizard-driven interface and toolbar allow users to build territories easily. Complex balancing algorithms are applied to help establish potential franchise areas and assign sales territories consisting of multiple variables and levels.

**Figure 1**  
**Territory Design Menu**



## Key Benefits of Properly Balanced Territories

The benefits of properly balanced territories outweigh the initial resource cost and investment in specialized territory management services or software, and is a better investment alternative than manually constructing territories. With the powerful analytic tools and geographic display of these territories and data, you will be able to

- Identify overlapping sales districts and reallocate territories accordingly.
- Prioritize sales accounts and make territories equitable, thus giving all sales reps equal opportunity for maximum performance.
- Save on sales or distribution costs due to travel time and expenses.
- Make territories more compact.
- Benchmark performance from year to year.

## Key Features of Territory Design

Territory Design has several key features for creating and maximizing your territories. The following table breaks these features down.

Key Features	Highlights
Automate territory creation.	Save time by bypassing manual iterations. Cut out the spreadsheets, whiteboards, and editing sessions.
Dynamically edit your territory solutions.	Customize your automatically generated territories using the map, chart, or tabular views to address new accounts or consolidations.
Use multiple variables and weighted fields for automatic balancing.	Build territories based on your sales figures, total households, and number of customers and assign the importance to each variable.
Incorporate your own data.	For example, you can balance your territories based on number of clients visited per area or your quarterly profits. Additionally, you can use the nationwide demographic data bundled with Business Analyst, such as current population, households, and income statistics.
Set up multiple hierarchies for assigning managers to different territory levels.	Build your territories with a base level of geography (such as ZIP Codes) and distribute the higher levels into different assigned areas, such as sales regions, distribution zones, or political districts.
Set up barriers to limit areas from your analysis.	For example, you may want to exclude an area with a large competitor presence or ensure territories don't cross the river into Manhattan.
Prepare Territory Reports.	Disseminate results throughout your organization with boardroom-ready PDF reports. For example, you can easily communicate a snapshot of your territory solution or compare last year's versions to the current alignment.

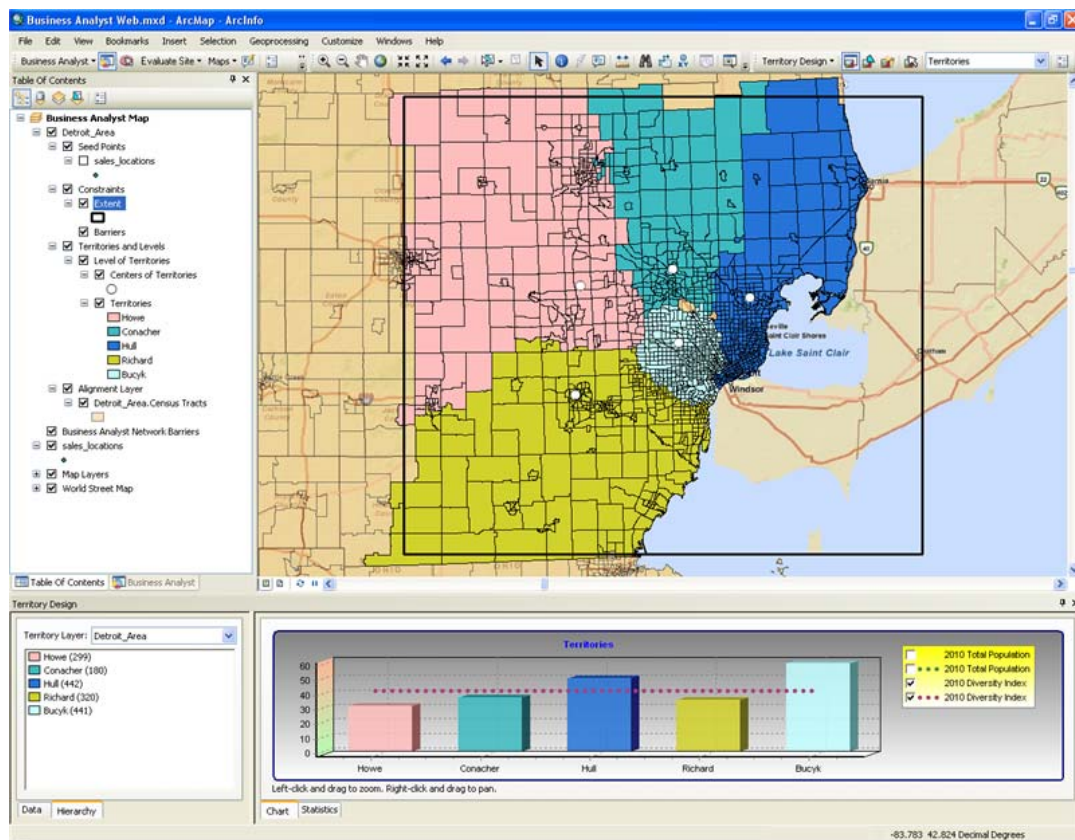
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## Territory Creation Methods

There are five core methods to create territories used within Territory Design:

- **Create territories from seed points.** This option can be used if you have a point layer with unique locations, called seed points. The unique locations are often your offices or stores. An example of using this method is the creation of franchises around your existing stores.

**Figure 2**  
Create territories from seed points example.

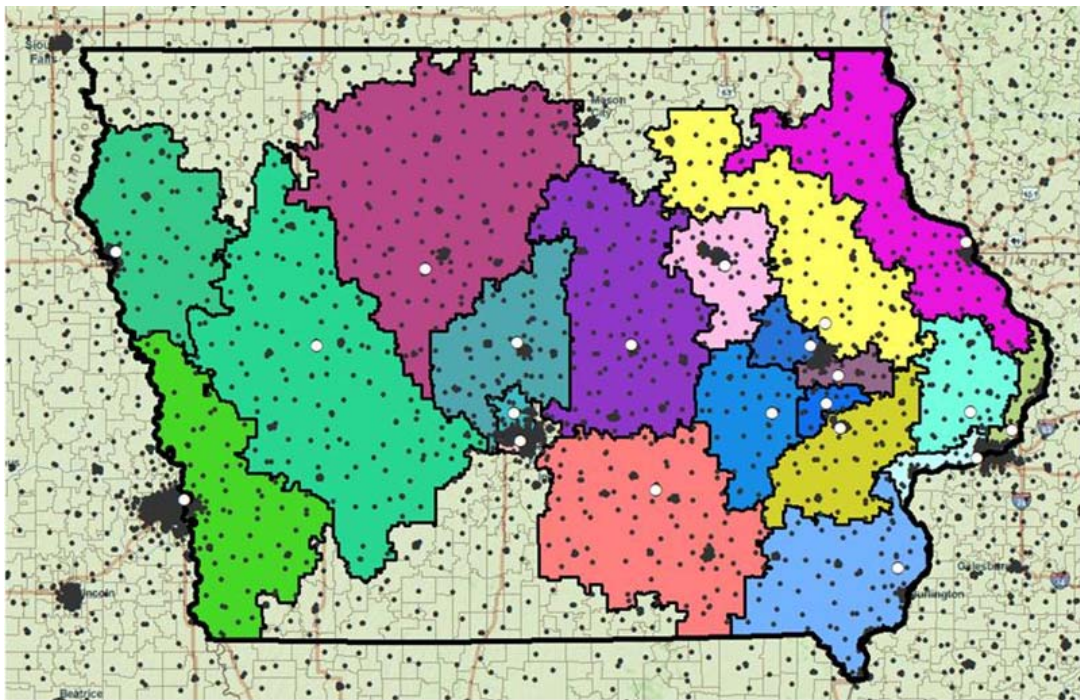


The above screen capture shows Territory Design for ArcGIS® in action. This example is a regional solution of five seed point locations, such as stores or offices, and their corresponding territories in the Detroit area. The main components are the map, table of contents, Territory Design toolbar, and Territory Design Window. The Territory Design Window houses summary information about your territories in different views, or tabs: Data view, Hierarchy view, Chart view, and Statistics view. The black rectangle represents the geographic extent of the study area. The territories created fall within this geographic extent. The Hierarchy view in the bottom left shows the number of census tracts in each territory. As more territory levels are added, the assignments are listed here. The Chart view at the bottom right shows how well the territories are balanced by any variable you choose, in this case Population and Diversity Index are considered. Each bar represents an individual territory assigned to a manager. The dotted line in the graph shows where the territories should be if this was an optimally balanced solution. As you

can see from the Chart view, these territories are slightly unbalanced, meaning more optimization might be necessary.

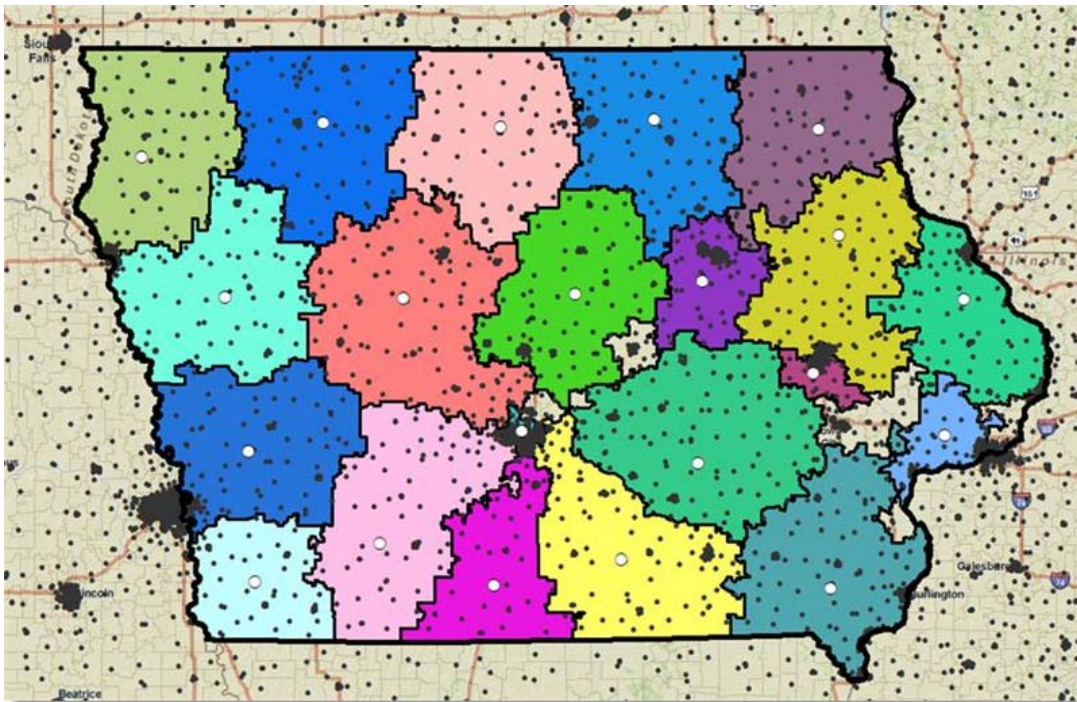
- **Create territories from optimal locations.** This option can be used to build territories around optimally placed virtual centers. Territory Design will analyze a base set of geographic elements, such as ZIP Codes, and place virtual territory centers at the most optimal sites. Territories then grow from these sites to fill the specified area. In figure 3, territories of up to 150,000 people are created for the state of Iowa. The starting locations are selected by finding the clusters of highly dense areas. The territories are then built around those until a population of 150,000 is reached. The greatest opportunity is most likely in these denser urban areas where travel time for your staff or customers is minimized. However, travel time for the entire state is not minimized.

**Figure 3**  
**Create territories from optimal locations for the state of Iowa.**



- **Create territories from centers of density.** This option can be used if you have no seed points. Virtual centers are automatically found based on areas of dense locations or attributes. In figure 4, territories of up to 150,000 people were again created. The starting locations are selected using a combination of finding the population clusters in conjunction with considering the entire coverage area. This ensures a more equal coverage of the entire area—in this case, the state of Iowa. The drawback to this method is that even though the entire market is filled, the more rural territories might not hold the best opportunities and the driving distance might spread farther out.

**Figure 4**  
**Create territories from centers of density for the state of Iowa**  
**using the same parameters as in figure 3.**

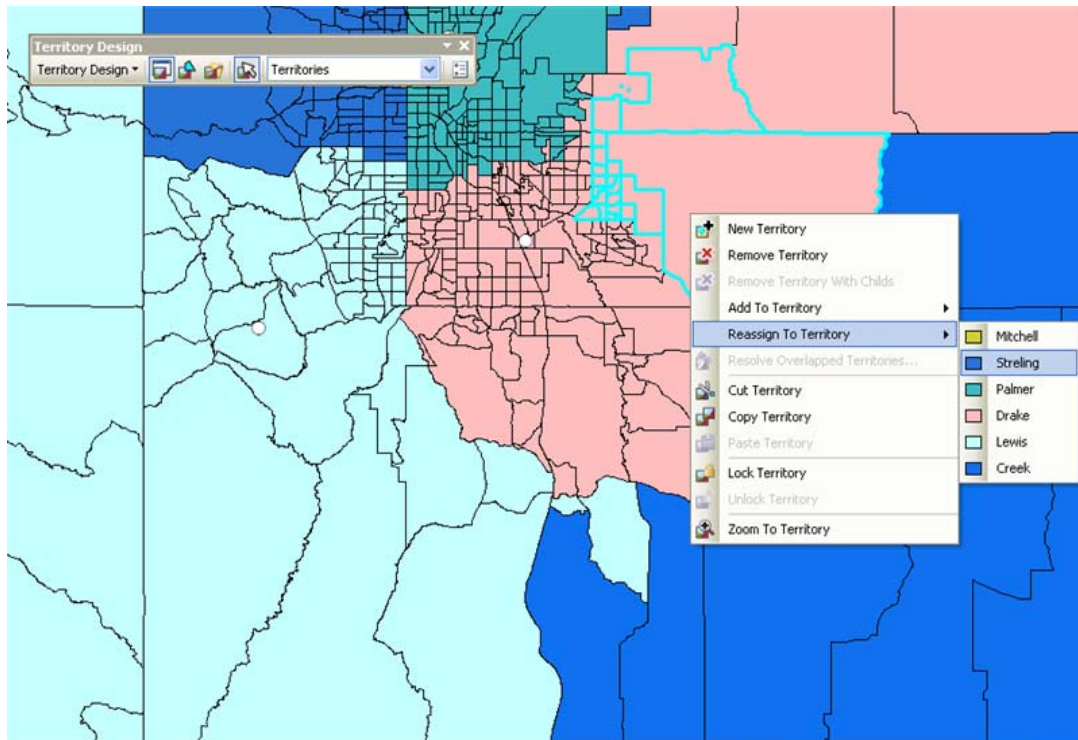


- **Import territories from a database.** This option can be used if you have a territory solution in table format such as a spreadsheet. This allows you to bring in any tabular-based collection of territories or assignments and visualize it on the map. You can then rebalance or improve the legacy territories and redistribute the solution throughout your organization.

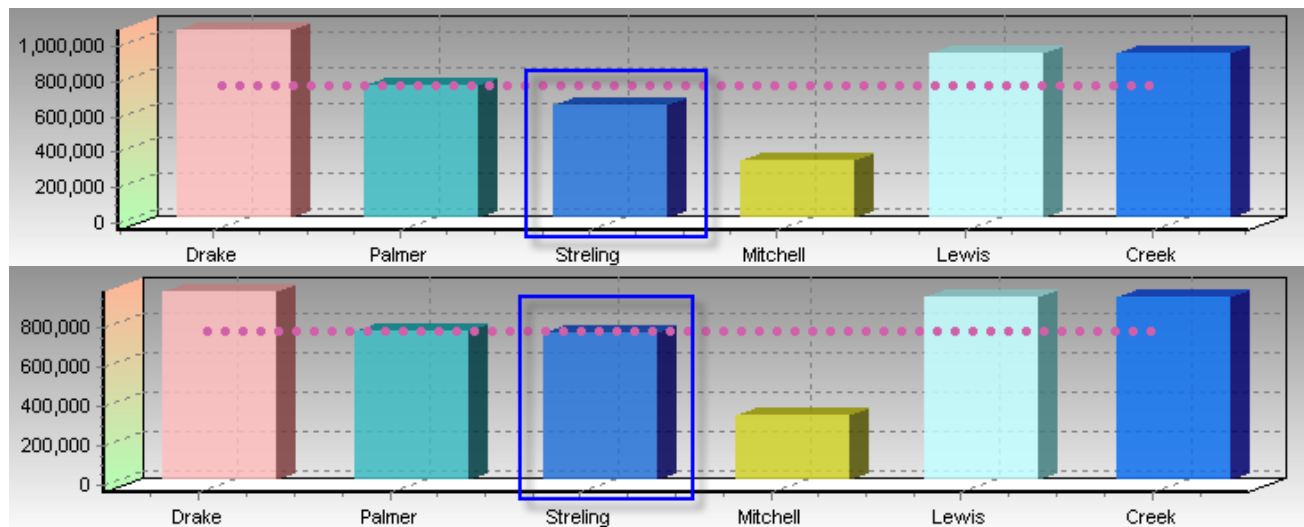


- **Manually create territories.** This option can be used to select and assign territories freehand from the map. When you manually select, the graph is dynamically updated (see figures 5 and 6). You can start entirely from scratch or manually modify territories after the automatic creation and balancing process.

**Figure 5**  
**Manually create territories.**



**Figure 6**  
**Dynamic Updating of Territory Design in the Window Chart View**



The Territory Design Chart view is dynamically updated when you manually reassign territories. The top graph in figure 6 shows results before reassignment, and the bottom graph shows results after reassignment. The dotted line shows the average statistical balance of all territories. The closer each territory is to the line, the better the territories are balanced.

### Industry Example

Recently, a branch in the military started implementing Territory Design to better manage its recruitment efforts. Before using Territory Design, it manually plotted recruitment territories and entered them into mapping software.<sup>1</sup> Some of the factors and methods that played into creating and managing the territories were

- Finding the ZIP Codes with the largest population aged 18–30
- Finding those same ZIP Codes that had the most leads
- "Eyeing" the ZIP Codes and plotting them out

This was a laborious and lengthy process that took five to six months to complete.

Since this client partnered with Esri and implemented Territory Design, they were able to reduce their efforts from six months to a few weeks, and with better results. The recruitment territories are more intelligently designed, with greater demographic detail, as more variables are available. Plus, Territory Design enables them to customize each territory with different combinations of demographic variables and weights, thus making territories more dynamic and better focused. This ultimately means better recruitment results.

<sup>1</sup> This client was not an Esri customer at the time it was manually plotting recruitment territories.



## About Esri

Since 1969, Esri has been helping organizations map and model our world. Esri's GIS software tools and methodologies enable these organizations to effectively analyze and manage their geographic information and make better decisions. They are supported by our experienced and knowledgeable staff and extensive network of business partners and international distributors.

A full-service GIS company, Esri supports the implementation of GIS technology on desktops, servers, online services, and mobile devices. These GIS solutions are flexible, customizable, and easy to use.

## Our Focus

Esri software is used by hundreds of thousands of organizations that apply GIS to solve problems and make our world a better place to live. We pay close attention to our users to ensure they have the best tools possible to accomplish their missions. A comprehensive suite of training options offered worldwide helps our users fully leverage their GIS applications.

Esri is a socially conscious business, actively supporting organizations involved in education, conservation, sustainable development, and humanitarian affairs.

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