Digital mapping

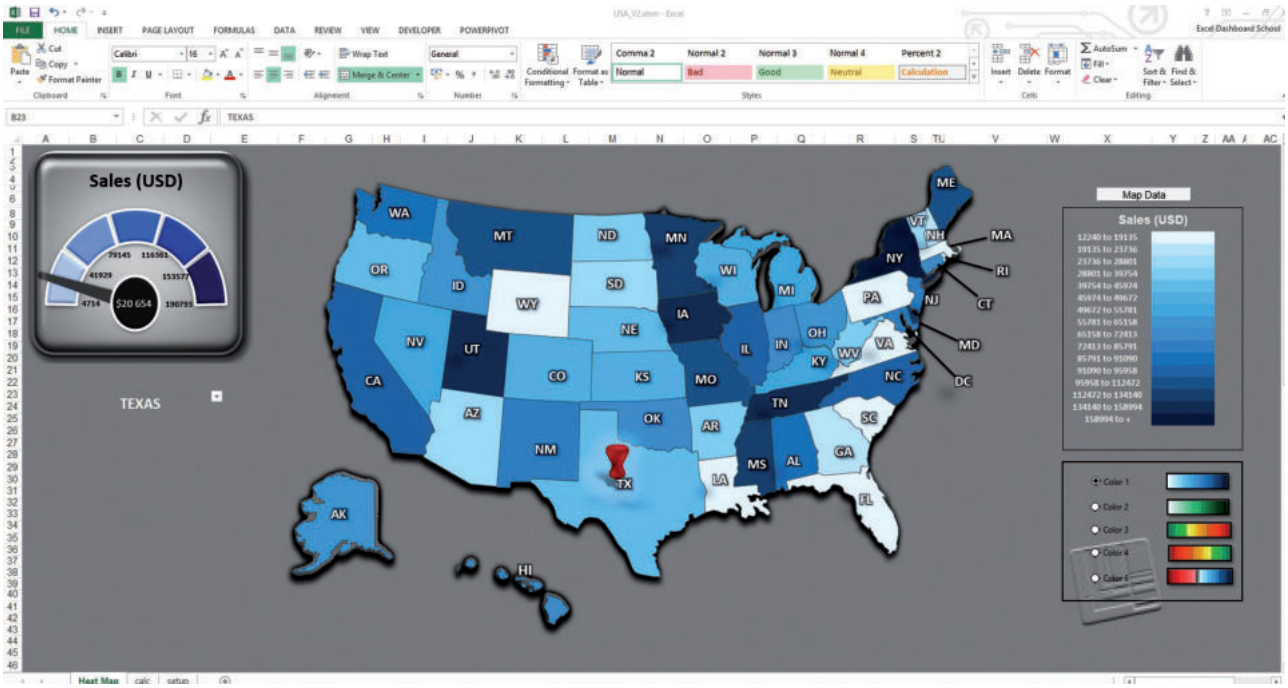
Digital mapping is a type of software that allows for the representation of cartographic features whose values and attributes can be manipulated and stored. It can be divided into three types: **Geography Information Systems (GIS), Computer-Aided Cartography (CAC)** and **mapping programs.**

GIS programs usually provide a huge potential to store, manage and analyse referenced and interconnected data. The first GIS standard packages were created in the mid 1960s in order to process an increasing quantity of spatial data, thanks to a change, started in the 1950s, of the way in which spatial data was analysed. The main characteristic of GIS is its topological structure, which enables the user to work with logical relations between different geometric elements and attributes, and recognise elements with identical attributes (e.g. different objects with the attribute *forest*). In recent years, GIS applications have expanded continuously, but they are still not very user-friendly, difficult to learn, and often rather expensive. For this reason, they have been supplemented by **GIS desktop software.**

CAC software is a type of software with a large number of special functions and tools used for high quality visualisation of spatial data. It often works with stacked data layers instead of topological relations. As there are no attached attributes, identical objects have to be grouped by putting them on a new layer. CAC is a general term that can both refer to GIS Desktop Publishing and CAD. CAD can provide overall mapping toolboxes that fill the gap between the more simple DTP and the complex GIS systems, because it combines vector data with layers of raster data. The most common types of CAD used for digital mapping are Microstation and AutoCad, initially designed for mechanical engineering, and later adapted for digital cartography. Unfortunately, CAD is a complex program, not easy to use.

A series of **mapping programs**, which work with a limited number of base maps, are available for non-expert users. In contrast with DTP and some CAD programs, mapping systems assign symbols, texture and colours to chosen objects on the map which are connected to a database. This means that you can work on a readymade map and modify it by selecting colours or other features without the complex calculations necessary with CAD. The most common mapping programs are: OCAD, RegioGraph, Map Viewer and EASYMAP.

stacked: *impilato*
toolbox: *cassetta degli attrezzi/strumenti*



1 **Read this promotional article and decide if the statements are true or false. Correct the false ones.**

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OCAD is a powerful software package for producing and editing any kind of map (e.g. topographic maps, city maps, hiking maps, Internet maps). With the same software package you can capture data, and finally, edit and publish it. Vectorisation of digital background maps is one of the most powerful and efficient applications. OCAD has developed an import and export function for geodata, which helps you to assign geodata to your predefined map symbols automatically. OCAD provides several export formats so that maps can be printed in a DTP environment. Furthermore, DTP files can also be imported into OCAD in order to benefit from its specific cartographic drawing and editing tools, or to transfer them into a GIS environment. The OCAD Internet Map (OIM) Wizard helps you create an interactive web version of your maps. Step by step, you can decide how many zoom levels your map should have or which hotspots, links or search functions should be added. However, if you prefer a static version of your map, you can export it in raster format. OCAD is available in 16 languages and in more than 77 countries in a great variety of sectors: map publishers, national institutes of cartography and topography, land surveying offices, and municipality planning.

Adapted from: https://www.ocad.com/en

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1. OCAD is a type of CAC software.	☐	☐
2. OCAD can be used both for capturing and editing data.	☐	☐
3. OCAD can import geodata.	☐	☐
4. OCAD maps can be printed with DTP.	☐	☐
5. OCAD can only import GIS files.	☐	☐
6. OCAD only creates interactive maps.	☐	☐
7. Static maps are in vector format.	☐	☐
8. OCAD is available in 16 languages and in 77 countries.	☐	☐

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