

# **Training Course Brochure**



**AGI Accredited Training** 

# **Cadcorp Training Brochure**



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# **Cadcorp Training**

# The Benefits of Training

Training is vital for the successful delivery of any GIS implementation. At Cadcorp we work with customers to develop the knowledge and skills required to set up, deploy, utilise and ultimately manage a system for your organisation.

Cadcorp offers a range of standard courses that are delivered as online instructor-led sessions. Delegates can choose from public scheduled online course dates or contact Cadcorp to arrange an online course for your organisation.

The public courses are scheduled throughout the year and the dates are published on the <u>Training</u> <u>page of the Cadcorp website</u>. For customer specific groups, we offer the range of standard courses and in addition, we are happy to assess your specific needs for training, and we can customise the courses accordingly.

All standard courses are accredited by the Association for Geographic Information (AGI) and can contribute to the achievement of Chartered Geographer status. Continuing Professional Development (CPD) points are awarded - see course pages for allocation.

All students will receive a comprehensive training manual containing real-life examples. We normally supply the training data, or for customer specific groups, you may choose to provide your own. Our courses use training data from Ordnance Survey Great Britain, Ordnance Survey Northern Ireland, Ordnance Survey Ireland, or their equivalents from around the world.

### Our Approach

Our courses are designed to be hands-on and are instructor-led with time for recap practice sessions. We cap the number of delegates on a course, the cap varies dependant on the course - see course pages for the number. This is done to ensure that the instructor can give each delegate the attention and support required.

We encourage students to visit the <u>Cadcorp Community</u> on completion of a training course and use this portal as a vehicle for sharing information with the community of Cadcorp users.

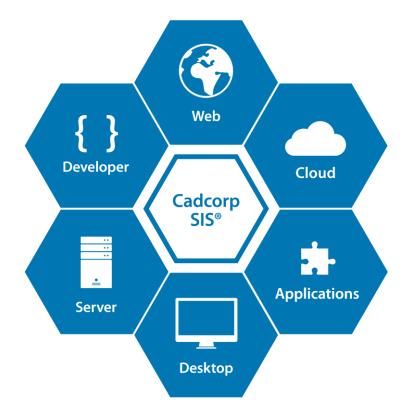
Courses are delivered using the most recent version of Cadcorp SIS. Cadcorp will provide sign-in details to enable the delegate to access the software and training setup on our Cloud server. Whilst our courses are primarily delivered online, if you prefer to have training delivered in person, please contact your Cadcorp account manager to discuss this option.



# **Cadcorp SIS Products**

Cadcorp SIS software is available as:

- Desktop GIS for map data viewing, editing, creation and modelling
- Developer Kits to enable bespoke GIS application creation and integration
- ActiveX based runtime for application deployment
- Web-based GIS for web application creation and data distribution and finally
- **Mobile GIS**. All Cadcorp software uses the same methods and code, ensuring consistency and inter-operability across the product range.



The Cadcorp Spatial Information System is an integrated family of geospatial products comprising desktop, web and developer applications. Products are available for all phases of spatial data management from creation, through to application development, deployment and data distribution.

Compatibility between the various parts of the Cadcorp SIS product suite is guaranteed because all of the products share a common core source code.



# **Desktop Product Training**

# Introduction to Cadcorp SIS Desktop (2 days)

This course provides the basics for everyday use of Cadcorp SIS. Students are introduced to the basic concepts underpinning GIS, and shown how to find a location, and view, create, edit and print maps. Day 2 introduces students to creating and managing their own files, extends their knowledge about creating and editing data. We explore simple analytical functionality including using the Cadcorp SIS for querying graphical and attribute data and creating thematic maps.

#### Who should attend?

This course has been designed for students who are new to GIS and/or Cadcorp SIS. Student numbers are limited to 5.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of the principles of GIS
- Be able to use the main GIS functionality in Cadcorp SIS

### Agenda

- An Introduction to Cadcorp SIS
- Spatial Data and Cadcorp SIS Concepts
- Using a Gazetteer
- Creating Prints, PDFs and Images for Documents
- Creating and Managing Overlays and SWDs
- Creating and Editing Spatial Data
- An Introduction to Attributes, Properties, Schema and Expressions
- An Introduction to Querying Data
- An Introduction to Thematic Mapping

#### **Prerequisites**

- No prior knowledge of GIS is assumed
- Students need to be proficient in the use of:
  - The mouse and keyboard
  - Windows, including:
    - Windows Explorer: files and directories, cut, copy, paste, delete, and rename
- Students need an awareness of:
  - Microsoft Office programs including Word, Excel, Access
  - Adobe Reader



# Advanced Cadcorp SIS Desktop (2 day)

This course will enable a Cadcorp SIS user to build upon the knowledge picked up in the *Introduction* to Cadcorp SIS Desktop course. You will take an in-depth look at how to filter, combine and question your spatial data. Advanced methods of displaying your data by using functionality such as Advanced Thematic Maps and Process themes will be explored. You will learn how to produce a video output of a Temporal range of data and use the 3D mapping functionality.

#### Who should attend?

Those who have completed *An Introduction to Cadcorp SIS Desktop* course. Student numbers are limited to 5.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Understand how to use some more advanced GIS functionality
- Display an understanding of how to run SQL statements and Expressions
- Create various advanced Thematic mapping output
- Be able to manage Cadcorp SIS

#### Agenda

- Creating Expressions and SQL Statements
- Creating Analysis and Process Overlays
- Hotspot Mapping
- Temporal Control Bar
- Advanced Thematic Maps
  - Choropleth Themes
  - Bivariate Themes
  - Expression Themes
  - Operation Themes
- Advanced Creating and Editing Spatial Data
- Routing Analysis
- 3D Mapping

### **Prerequisites**

Completion of the course An Introduction to Cadcorp SIS Desktop



# Cadcorp SIS Desktop Administration (1 day)

This course will enable a Cadcorp SIS user to administrate the product, its associated files, and manage the GIS data for their organisation. The content builds upon Day 2 of *An Introduction to Cadcorp SIS Desktop*. System Administrators will learn how to export data into useful GIS file formats and learn about the best performing formats for Cadcorp SIS.

#### Who should attend?

Those who have completed *An Introduction to Cadcorp SIS Desktop* course. Student numbers are limited to 4.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Understand how to use some more advanced GIS functionality
- Display an understanding of how to administer and maintain Raster and Vector datasets
- Create and manage Named Object Libraries (NOLs)
- Be able to manage Cadcorp SIS

#### Agenda

- Table joins, and more on building expressions
- Managing data
- Named Object Libraries (NOLs)
- Managing Cadcorp SIS

### **Prerequisites**

Completion of the course An Introduction to Cadcorp SIS Desktop.



# Cadcorp SIS & Ordnance Survey GB Data (1/2 day)

This course introduces students to Ordnance Survey (OS) data using Cadcorp SIS. It provides an insight into accessing and managing the OS GB major datasets.

You will explore how to use Cadcorp SIS Desktop for data management - to process the various OS datasets such as ZoomStack; Mastermap, Open Greenspaces etc.

In addition, you will gain an understanding of how to access the OS Data Hub from within Cadcorp SIS Desktop and WebMap using Web Map Services and the OS API keys.

#### Who should attend?

Those who have some experience of GIS and Cadcorp SIS. Student numbers are limited to 5.

#### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of how Cadcorp SIS can be used to access and manage OS OpenData and OS Premium data.
- Understand the use of direct access of OS Data using OS Data Hub APIs

#### Agenda

- An Introduction to the PSGA and the OS Data Hub
- OS Data Hub website for OpenData and Premium data downloads
- Available download File Formats
- Using Cadcorp SIS OS (GB) Tools
- Add overlays using the OS Data Hub API key access

### **Prerequisites**

Completion of the course An Introduction to Cadcorp SIS Desktop.

Students need an awareness of:

- Microsoft Office programs
- GIS data (raster and vector)



# **Upgrading to Cadcorp SIS Desktop 9.1 (1 day)**

This course introduces students to Cadcorp SIS Desktop 9.1. It provides a hands-on insight to the new interface, concepts and features that are available in this software release. Students will be able to test the new functionality and explore some of the practical benefits from upgrading to this release.

#### Who should attend?

Those who are new to Cadcorp SIS Desktop 9.1 but who have a good working knowledge and understanding of Cadcorp SIS 9 or earlier versions. Student numbers are limited to 5.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Recognise the changes to the Fluent User Interface, Dialogs and Wizards.
- Understand how to use the new and improved query options and search methods including the additional Analysis tools
- Know when and how to use the improved Themes and Dynamic Theme options
- Understand how to publish and synchronise SWDs directly to Cadcorp GeognoSIS

#### Agenda

- The user interface update
- Add Overlays, Overlays and Table enhancements
- New functionality for managing and filtering data in the table view
- Improved Expression Builder syntax checks, new syntax prompts and additional functions
- The new advanced data capture functionality
- New & improved Label Themes and Cluster Theme options
- New Analysis tools for Cartograms, Variable Buffers & Elevation Profiles
- GeognoSIS Synchronisation

### **Prerequisites**

- Prior knowledge of GIS is assumed
- Students need to be proficient in the use of Cadcorp SIS 9.0 or earlier
- Students need an awareness of:
  - Microsoft Office programs including Excel and Access
  - GIS data including that from other GIS/CAD vendors (ESRI, MapInfo, AutoCAD etc.) would be preferred, but not necessary.



# Cadcorp SIS Risk Modeller (1 day)

This course introduces students to the Cadcorp SIS Risk Modeller. The application works alongside Cadcorp SIS Desktop to provide extra analytical operations to determine risk by combining the effects of spatial and attribute data from a range of different layers. Risk Modeller uses thematic mapping for the presentation of results. These can be displayed as heat maps or RAG (Red Amber Green) levels to quickly identify and compare risk between scenarios.

#### Who should attend?

Those who have some experience of Cadcorp SIS. Student numbers are limited to 4.

#### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of the concepts of, and how to use, Cadcorp SIS Risk Modeller
- Choose the appropriate risk model(s) for the data, and model incident data against other factors such as geodemographic data categories

#### Agenda

- Creating a Grid overlay to display the risk model
- Understanding the 5 Risk Models
- Create Attribute risk models
- Use the appropriate Theme options to display the output
- Create Attribute risk models based on a weighting factor
- Using wild cards and numeric operators
- Create multiple-Attribute risk models using attributes from several overlays
- Create Quantity risk models pure count of objects; count by area size, count by attribute
- Create Life risk models weighting data based on numbers of fatalities/casualties/rescues
- Create Link Related risk models applying incident data to the road network
- Create Route Costs risk models use the road network to analyse areas of risk through isolation and poor transport links
- Pulling it all together Using an Expression within Cadcorp SIS to create a combined risk map.

#### **Prerequisites**

- Prior knowledge of Cadcorp SIS is assumed
- Students need to be proficient in the use of:
  - Windows, including Windows Explorer: files and directories, cut, copy, paste, delete, and rename
- Students need an awareness of:
  - Microsoft Office programs including Word, Excel, Access



# **Cadcorp SIS Workload Modeller (2 days)**

This course introduces students to the Cadcorp SIS Workload Modeller and provides the information, knowledge, and practical skills for using this software.

#### Who should attend?

Those who have some experience of Cadcorp SIS. Student numbers are limited to 4.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of the concepts of and how to use Cadcorp SIS Workload
  Modeller
- Load, filter, analyse and model incident data.

#### Agenda

- Customising the installation
- Building the repository of historic data
- Data model overview (historic data)
- Importing incident and callout data
- Viewing the historic data in SIS using filters
- Preparing a database of Route Cost
- Analysis of Historic data
- Modelling
- Using different modelling options
- Dual Staffing
- Cover Moves
- Looking at the Route Cost database

### **Prerequisites**

- Prior knowledge of Cadcorp SIS is assumed
- Students need to be proficient in the use of:
  - The Mouse and Keyboard
  - Windows, including:
    - Windows Explorer: files and directories, cut, copy, paste, delete, and rename
- Students need an awareness of:
  - Microsoft Office programs including Word, Excel, Access



# **Cadcorp SIS Additional Modules by Product (1 day)**

It is possible to create a customised training course by combining topics covered in **An Introduction to Cadcorp SIS Desktop** and/or **Administering Cadcorp SIS**, with any of the following modules:

- The CAD tools
- Rubbersheeting
- Working with Topology
- 4D analysis and visualisation
- Kernel Density Estimation (KDE) hotspot mapping
- Building expressions

Cadcorp also offers training in specialised application add-ins that have been created using GisLink.

- Routing Tools
- Housing Toolkit
- Book Plotter

Please contact your Cadcorp Account Manager if you are interested in a customised course.

Student numbers are limited to 4.



# **Spatial Database Admin Training**

# Working with PostGIS and Cadcorp SIS (1 day)

This course provides a detailed guide to installing a PostgreSQL database and adding the spatial plugin PostGIS, in a Windows environment. You will look at how to configure Network Connectivity and create spatial databases.

You will use SQL (Structured Query Language) within the PGAdmin interface, to add/drop tables; add data and manage the security such as setting roles and permissions. The performance of the database is key, and you will look at monitoring and setting maintenance tasks including the setup of backups and recovery options.

#### Who should attend?

Those who will administer maintain and use spatial data. This course does cover some end-user activity such as importing and exporting data from within Cadcorp SIS Desktop. Student numbers are limited to 4.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of the structure and principles of a PostgreSQL/PostGIS database
- Know how to configure, monitor, and maintain a database
- Use Cadcorp SIS to carry out database filtering and querying

#### Agenda

- Database Server Specification
- PostgreSQL database and PostGIS Extensions
- Configuring Network Connectivity
- Database Creation and Database Security
  - Using Multiple Databases
  - Using Roles and Schemas
  - Managing data access
  - Granting Permissions including Read Only Access/Editing Data
  - o Create login accounts
- Import and Exporting data from the desktop GIS
- View and Trigger creation and Table management

### Prerequisites

Completion of the course *An Introduction to Cadcorp SIS Desktop* or *Cadcorp SIS Admin* or equivalent knowledge of GIS using other GIS Desktop products.



# Working with SQL Server and Cadcorp SIS (1 day)

This course provides a detailed guide to installing a SQL Server database in a Windows environment. You will look at how to configure Network Connectivity and create spatial databases.

You will use SQL (Structured Query Language) within the SQL Server Studio Manager interface, to add/drop tables; add data and manage the security such as setting roles and permissions. The performance of the database is key, and you will look at monitoring and setting maintenance tasks including the setup of backups and recovery options.

#### Who should attend?

Those who will administer maintain and use spatial data. This course does cover some end-user activity such as importing and exporting data from within Cadcorp SIS Desktop. Student numbers are limited to 4.

#### **Aims and Objectives**

 To teach GIS specialists how to use SQL Server as the corporate repository for storing spatial data.

By the end of the course, you will be able to:

- Demonstrate an understanding of the structure and principles of a SQL Server database
- Know how to configure, monitor, and maintain a database
- Use Cadcorp SIS to carry out database filtering and querying

#### Agenda

- Introduction and Server Specification
- SQL Server Administration including: Installing SQL Server, Network Connectivity Configuration, Using SQL Server Studio Manager, Creating a SQL Server databases and Setting up Database Security
- Create Database Log-in accounts and roles
- Exporting Data from SIS into SQL Server
- Reading SQL Server spatial Layers into SIS
- Creating Empty spatial layers in SQL Server
- Data capture & editing spatial Data
- Spatial Analysis & Filtering Data
- Example Security Models
- Loading, Managing & Using Ordnance Survey Datasets
- View and Trigger creation and Table management

### **Prerequisites**

Completion of the course *An Introduction to Cadcorp SIS Desktop* or *Cadcorp SIS Admin* or equivalent knowledge of GIS using other GIS Desktop products.



# **Web Mapping Training**

# Cadcorp SIS WebMap Admin (1 day)

This course details the functions of WebMap and introduces students to GeognoSIS. The course gives the background required for administering and maintaining the website, including setting user permissions, SWD data set up and implementing Local Knowledge searches.

#### Who should attend?

This course is aimed at those who will administer and maintain the WebMap application. It does not cover installation or customisation involving any programming. It does cover a small amount code alteration for styling – no prior knowledge is needed. Student numbers are limited to 4.

#### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of the structure and principles of a WebMap website
- Know how to prepare map files and SWDs for use in a WebMap website
- Know how to configure, monitor, and maintain a WebMap website

### Agenda

- Introduction to WebMap and GeognoSIS
- Creating SWDs for WebMap
- The GeognoSIS Manager
- The WebMap Admin Page
- Admin Page Layers Administration
- Admin Page Bookmarks, Styles, and Icons
- Map Page Toolbar
- Map Page Menu
- Printing
- Website Styling
- Report IT
- Local Knowledge™

### **Prerequisites**

- Prior knowledge of GIS and Cadcorp SIS is assumed
- Students need to be proficient in the use of:
  - Windows Explorer: files and directories, cut, copy, paste, delete, and rename
- Students need an awareness of:
  - Microsoft Office programs including Word, Excel, Access
  - Adobe Reader
  - Text editors such as Notepad++



# Notice Board™ Admin (1 day)

This course details the functions of Notice Board and introduces students to the setup of Cadcorp SIS SWD overlays and Local Knowledge Templates. The course provides the background required for administering and maintaining the webpage.

#### Who should attend?

This course is aimed at those who will administer and maintain Notice Board. It does not cover installation. It does cover a small amount code creation/alteration for styling. However, no prior knowledge is needed. Student numbers are limited to 4.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of the structure and principles of a Notice Board website
- Know how to prepare map files and SWDs for use in a Notice Board website
- Know how to configure, monitor, and maintain a Notice Board website

### Agenda

- Setting Saved Window Definitions (SWDs) properties for Notice Board and Local Knowledge
- Building Expression columns in the SWD
- Use the Notice Board Admin page to;
  - o create, alter and maintain notices
  - o create and alter Local Knowledge templates
  - o add and manage Image files
  - manage connections to databases
  - o manage the return values of Quick Searches

### **Prerequisites**

- Prior knowledge of Cadcorp SIS is assumed
- Students need to be proficient in the use of:
  - Windows Explorer: files and directories, cut, copy, paste, delete, and rename
- Students need an awareness of:
  - Microsoft Office programs including Word, Excel, Access
  - Adobe Reader
  - Text editors such as Notepad++



# **Developer Courses**

# An Introduction to Working with GisLink (1 day)

### **Extending the Cadcorp SIS desktop with Add-ins**

This course introduces students to Cadcorp SIS GisLink. Using exercises, it provides the essential steps in creating a Visual Basic project that provides Cadcorp SIS functionality. You will quickly discover how easy it is to write an application with the absolute minimum of code writing.

#### Who should attend?

Those who are users of Cadcorp SIS and use Visual Basic to develop applications. Student numbers are limited to 4.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of the fundamentals of GisLink programming
- Know how to structure and create working applications

#### Agenda

- Running GisLink Applications with Cadcorp SIS
- Building applications
- GisLink Methods
- Linking to a database
- Bring along your own GisLink ideas

### **Prerequisites**

Prior knowledge of GIS and Cadcorp SIS is assumed.

Students need to be proficient in the use of:

Visual Basic or the .NET development environment using Visual Studio



# An Introduction to using ActiveX with Cadcorp SIS (1 day)

### **Creating Cadcorp SIS Applications**

This course introduces students to the processes involved in both creating a "standalone" GIS application and embedding a GIS component within a larger application. Students will build an application from scratch, leading to a functional GIS data viewer with menus, toolbars, and a status bar.

Students are introduced to the Cadcorp Application Programming Interface (API) building confidence in developing bespoke GIS applications for deployment within their own organisation and for distribution and resale to their customers.

#### Who should attend?

Those who are users of Cadcorp SIS and use Visual Basic to develop applications. Student numbers are limited to 4.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of how to use the Application Programming Interface to provide extended GIS functionality
- Demonstrate an understanding of the scope and power of the Cadcorp SIS Control as a rapid application development tool
- Create a standalone GIS application

#### Agenda

- Creating a Windows Forms project using Visual Studio VB.NET
- Adding the Cadcorp SIS Control (ActiveX component)
- Invoking the inbuilt capabilities of the SIS Control
- Extending the capabilities of the application with custom commands
- Monitoring the end-user's actions and reacting to them
- Combining inbuilt capabilities with custom actions
- Licensing, building, and deploying an application

#### **Prerequisites**

Prior knowledge of GIS and Cadcorp SIS is assumed.

Students need to be proficient in the use of:

Visual Basic or the .NET development environment using Visual Studio



# **Developing Websites using GeognoSIS (2 days +)**

This course introduces the extensive programming interface of GeognoSIS, which enables websites to be built with a wide range of GIS functionality.

#### Who should attend?

Those who are going to build their own GeognoSIS website by programming either in a .NET-based language or C#. Student numbers are limited to 4.

### **Aims and Objectives**

By the end of the course, you will be able to:

- Demonstrate an understanding of the programming capability of GeognoSIS
- Create a working application

#### **Agenda**

- The GeognoSIS service
  - WSDL
  - The GeognoSIS Manger and the structure of GeognoSIS applications
- Building a Thin-Client website
  - Rendering Images
  - Pan and Zoom tools
  - Manipulating Data
  - Printing and Exporting
- Building a Thick-Client Website
  - Setting up Projects
  - Extending the Client-Side application class
  - Extending the server-side ASMX class
  - Configuring the application and deployment
- Stored Procedures for GeognoSIS
  - Creating the programming libraries
  - Creating a stored procedure in .NET and datatype in .NET
  - Extending the Thick-Client stored procedure package
  - Creating a stored procedure in Java

### **Prerequisites**

Prior knowledge of GIS and Cadcorp SIS is assumed.

Students need to be proficient in the use of:

- Either:
  - Visual Basic or the .NET development environment using Visual Studio using classes, libraries and compiling code; or
  - C#



# **Bespoke Courses/Consultancy**

# **Cadcorp SIS Refresher**

A refresher course may be appropriate where students have previously undertaken a Cadcorp training course.

### **Train the Trainer**

For situations where a large number of students require training, Cadcorp offer a Train the Trainer session. Our aim is to deliver a standard course complete with guidance on timing and other delivery methodologies for an experienced trainer.

# Industry and organisation-specific courses

Cadcorp work across a number of vertical markets and can offer tailored courses to meet the GIS requirements of these markets. Cadcorp can create a training needs analysis. Based on the analysis, Cadcorp can suggest appropriate working processes and build these into a bespoke agenda.

# Go-Live floor walking

Training often takes place prior to an implementation "going live". Cadcorp can provide a trainer for a floor walking presence to boost confidence and answer questions as they arise.

# **Other Consultancy Services**

If there are any enquiries regarding other Consultancy Services, please contact your Cadcorp account manager.