



*“Drafting for Broadband Applications”  
Version 3.6*

## Introduction

@MAppDR ensures that all drafting persons (both Comcast and contractors) adhere to the drafting standard employed by Comcast. @MAppDR also simplifies the drafting process while ensuring that drawings are drawn correctly and with additional intelligence.

## Application Objectives

The main objectives of the @MAppDR application are threefold. The first objective is to assist and improve the speed of the drafting process for Comcast electronic maps. Secondly, @MAppDR is to ensure that all CAD users on Comcast projects will be adhering to Comcast CAD drafting standards. Lastly, the application helps build connectivity or intelligence into our electronic maps to allow for automated problem solving and plant-to-address association in the future.

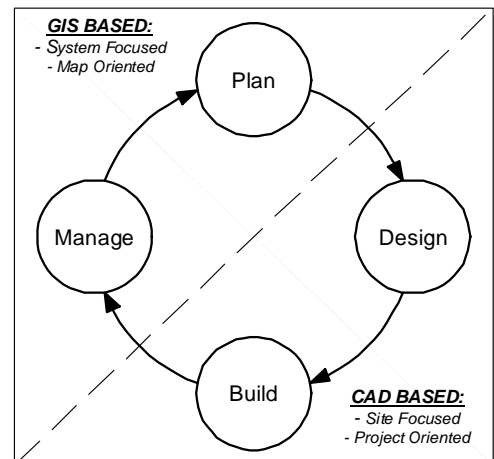
"I've harped many times before on the folly of assuming that written documentation, even if it's available as a spiffy set of Web pages, will inspire users to follow CAD standards. You simply must build standards into the CAD system through customization if you expect any reasonable level of compliance."

"Build Your CAD Standards" by Mark Middlebrook, April 2000 issue of CADALYST magazine, <http://www.cadalyst.com/cadalyst/article/articleDetail.jsp?id=89439>

## Standardization

CAD drafting standards are the detailed specifications for creating and maintaining electronic maps of the Comcast Outside Plant. The enforcement of CAD standards during the data capture (drafting) phase ensures a reliable data source, which can be used for planning, management, and other business decisions later.

A simplified work plan to the right shows a model of how projects proceed within an organization. First, the design of the assets takes place, followed by the construction of the assets. Once built, the assets must be managed, so that cost effective plans can be made to expand the infrastructure to meet future demand and opportunities.



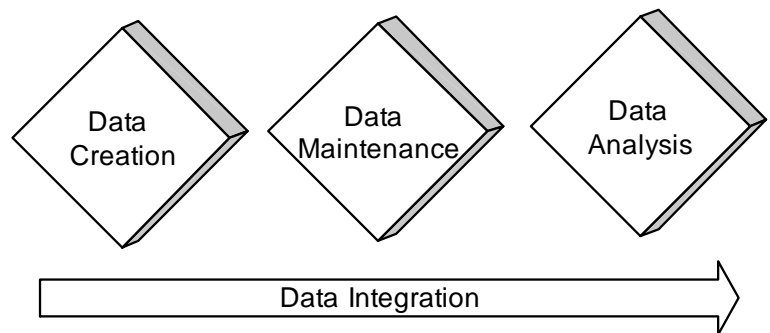
The users of CAD systems deal primarily with the design and construction of physical assets. Users within this segment are site-focused and project-oriented which means that they are more interested about the current project and the data associated with it. Once the project is finished these users move on to other projects and sites.

After completion of the drawings it is then handed off to the managers and planners. In the managing and planning phases, the type of work changes along with the needs of those users. Here, users manage and maintain the assets and plan for future scenarios. The more GIS oriented side of the organization is concerned not only with the infrastructure that has been captured, but also, the tasks performed become more system focused because the goal shifts toward long-term facilities and infrastructure management. These type of users focus not only on managing the equipment, or a single Node, that has been constructed, but also the multitude of Nodes, or the hundreds of miles of plant, over an extended period of time. Mapped facilities, or spatial information usually spans over a large geographic area and requires significant effort to manage effectively.

CAD/GIS software will be used extensively in business by a wide range of departments for a wide range of applications including tax appraisal, utility and infrastructure planning, marketing and demographic analysis.

Who uses CAD?	Who uses GIS?
Designers, engineers, those who need high accuracy, work on single projects at a time, focus on small areas, whose work is site-specific.	Planners, cartographers, and managers, those who predict demands on the system, who have a system-wide focus, whose jobs are process oriented rather than single project oriented.

When working with mapping information, data will be manipulated 3 ways. For example: (1) Data Creation (2) Data Maintenance (3) Data Analysis.



A key component in this process is data integration, the ability to use data throughout an organization. Usually data is dispersed and stored in disparate forms of CAD, GIS, spreadsheets and databases. Often data integrity is lost when an attempt is made to integrate all of these various sources of information that may have been created within the organization or obtained from other sources. Users need to be able to access that data and share it across business units on demand.

The benefits of data integration and data sharing cannot be realized without standardized CAD and GIS data. @MAppDR insures that the Outside Plant data captured is captured in a format that can then be used and processed in a GIS environment to meet the multiple Comcast business needs.

## ***@MApp Availability***

Comcast owns the @MApp drafting software suite of tools. It is made available to all Comcast regions and no charge. To receive a @MApp CD the regions Engineering Manager can contact the 2 individuals listed below.

To: [Evan\\_Wagner@cable.comcast.com](mailto:Evan_Wagner@cable.comcast.com)

CC: [Alex\\_Lepeska@cable.comcast.com](mailto:Alex_Lepeska@cable.comcast.com)

The Comcast regions will need to fill out a @MApp License Request, which will be provided upon their @MApp CD request.

Comcast drafting contractors can obtain a @MApp CD at no charge as well by contacting the 2 individuals listed above. Contractors will need 3 items to get a @MApp CD:

- 1) Identify the Comcast region they are working for and who their point of contact is in that region.
- 2) Fill out a @MApp License Request form.
- 3) Complete and mail the Comcast Non-Disclosure Agreement (NDA).

## ***@MApp System Requirements***

### **Autodesk Map Software**

The current release of @MAppDR (version 3.6) was designed for a typical desktop computer. This release of @MAppDR supports only the following AutoCAD Map software products:

AutoCAD Map 2000	(Map 4 with Service Pack 3)	<b>[Map 4.0]</b>
AutoCAD Map 2000i	(Map 4.5 with Service Pack 2)	<b>[Map 4.5]</b>
AutoCAD Map 2002	(Map 5.0 with Service Pack 1)	<b>[Map 5.0]</b>
AutoCAD Map 2002	(Map 6.0)	<b>[Map 6.0]</b>
AutoCAD Map 2004, 2005, 2006		<b>NOT SUPPORTED</b>

Autodesk changed many programming aspects in Map 2004. It has been confirmed that @MAppDR3.6 **“Will Not”** function properly in AutoCAD Map 2004. @MApp Support will not be available for AutoCAD Map 2004, 2005, and 2006 users at this time.

## Supported Operating Systems and Components

The following operating systems and service packs are required to support @MAppDR in this release:

Microsoft® Windows® 2000, Service Packs 1 or greater.

Windows NT® 4.0 Service Packs 6 and 6a

Windows XP Professional, Service Packs 1 or 2.

## Hardware Requirements

Autodesk recommends the following as the minimum hardware specifications for AutoCAD Map:

- Intel® Pentium® 233 MHz PC
- 128 MB RAM System Memory
- 1024x768x64K graphics card and color monitor
- Microsoft compatible network
- 250 Megabytes of available hard disk space

**Note:** These are the minimum requirements for running AutoCAD Map and @MAppDR/WO. @MAppDR/WO adds only a slight increase to the amount of resource overhead required to operate. The only exception is when the user is executing the QA tools that are discussed later in Chapter 11, as they have additional processing overhead.