



## FFI and Protocol Manager Terminology

### FFI Geographic Hierarchy: Administrative Units, Project Units, and Macro Plots

FFI uses a unique set of terms derived from FEAT and FIREMON to describe land areas and monitoring events. The basic units are:

- Administrative unit – An *administrative unit* is an area that is managed as an individual entity, such as a park, forested area, county or city, hunting unit, watershed study area, or other discrete land area. In FFI, an administrative unit is represented by an SQL Server database. Although multiple administrative units can reside on a computer, there is no communication between them. All analysis takes place within an individual administrative unit, and GIS data is managed and analyzed at the administrative unit level. An administrative unit is comparable to the *landunit* used in FEAT.
- Project unit – a *project unit* (equivalent to the FEAT *monitoring unit*) is a division of the entire sample population of an administrative unit. Project units are usually defined to represent an area on the ground. For example, a project unit could consist of "all areas in the Ponderosa vegetation type between 1500 and 2000 meters above sea level, more than 500 meters from the nearest road, and more than 1000 meters from the nearest stream." However, project units are not required to have any spatial meaning, but can be defined for temporary administrative or analysis purposes. They provide a means to functionally group macro plots for management and analysis. Project units can be defined so that they overlap spatially, and macro plots can be associated with multiple project units. Use the FFI Spatial module to spatially define a project unit.
- Macro plot – a macro plot is a distinct place on the face of the earth that can be sampled one or more times. A macro plot established within an administrative unit defines the location of the primary sample. The plot is used to establish and define permanent sampling sites as well as sites that contain multiple subsamples and sample types. Examples of macro plots might include:
  - A forest plot with four quadrants, two veg lines, ten herb frames, and four fuels lines.
  - A CBI plot with an understory circle and an overstory circle.

### Other FFI Terms

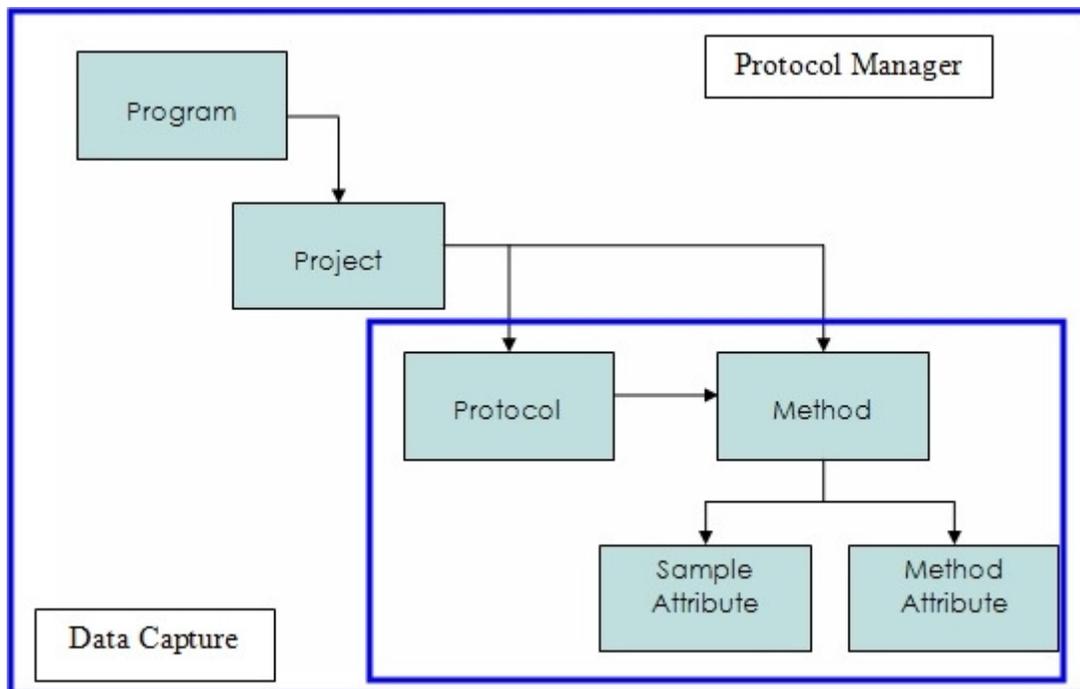
- Candidate plot – a geographic point within a project unit that has been identified as a potential macro plot.
- Sample event – the date of a visit to a macro plot.
- Monitoring status – a temporal association between a sample event and treatment or disturbance. Provides the sampling event order to the analysis tools. Three general components are observed:

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- Prefix – Pre (treatment), Post (treatment) or Re (measure). Other prefixes are allowed.
- Base – disturbance identifier (i.e. Burn 01, Burn 02, Treatment 01). Others are allowed.
- Suffix – Time span descriptor (i.e. Year 01, Year 02). Others are allowed.
- Strata – a grouping on a method attribute for analysis, often entered as a user variable.

### Protocol Manager Data Hierarchy

Protocol Manager uses a unique set of definitions, as depicted below, that are readily adaptable to any ecological monitoring program.



- Program – a collection of projects that use a consistent set of protocols to collect monitoring data for specific types within multiple geographic locations in response to a research question, or to meet an agency mission or mandate. For example, fire ecology or wetlands.
- Project – a collection of sampling protocols gathered for a specific purpose. For example, a set of protocols used in monitoring a tallgrass prairie versus. a set of protocols used in monitoring a hardwood forest.
- Protocol – a set of one or more closely related methods, compiled by a researcher, monitoring agency, or other entity, that are used to collect, analyze, and report field monitoring data in a consistent way over time. Protocols are a means of organizing methods in terms of common or related characteristics, so that they can be efficiently filtered and located. A protocol can contain one or

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more methods, and methods may occur in one or more protocols. For example, the surface fuels or CBI (present only in Protocol Manager) protocols.

- Method – a systematic procedure for collecting, analyzing, or reporting monitoring data consistently over time. Methods have these characteristics: they can be replicated by other investigators and are they have supporting documentation. In Protocol Manager, it is assumed that methods are contained within protocols, but this is not required. Methods can be created and maintained without protocols. Also, a method, such as litter and duff, can occur in more than one protocol.
- Attribute – a quantitative field measurement or summary value, or a qualitative descriptor, that represents conditions observed in the field.
  - Sample attribute – characterizes the visit. Sample attributes are often dimensions needed for calculations or analysis, such as length, width, area, point count.
  - Method attribute – a single measurement of the specimen, such as litter depth.