

A Field Survey & Mapping Toolkit for Australian Land Managers

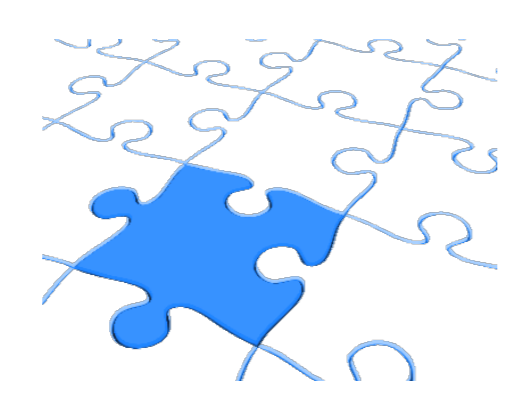
In the Beginning, the problem...



How can dispersed work groups record, share and annotate their field data (including maps) with only intermittent access to the internet?

In 2013, Geomancia began research and development work to address the challenges of survey work in remote areas.

We are now delighted to declare that "Dragonfly" is our solution.



A Solution Powered by Android™

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Dragonfly is built on the flexible, mobile and geographically-aware Android operating system.

As free and open software, Android is an excellent delivery platform for low-cost and customizable high-tech devices.

Android is the world's most popular mobile platform.

Dragonfly is currently running on Android 4.0.3, also known as "Ice Cream Sandwich".



A Rugged Hardware Kit



Dragonfly is deployed on 10" or 7" a military-grade Android tablet that is water, dust and impact resistant and able to operate at temperatures from -10 to +50 degrees Celsius. The Dragonfly hardware kit includes all the necessary peripherals for field survey work (except SIM card).



Display in full sunlight at midday



Optional 7" Toughpad

4-FOOT DROP RATING

IP65

MIL-STD-810G

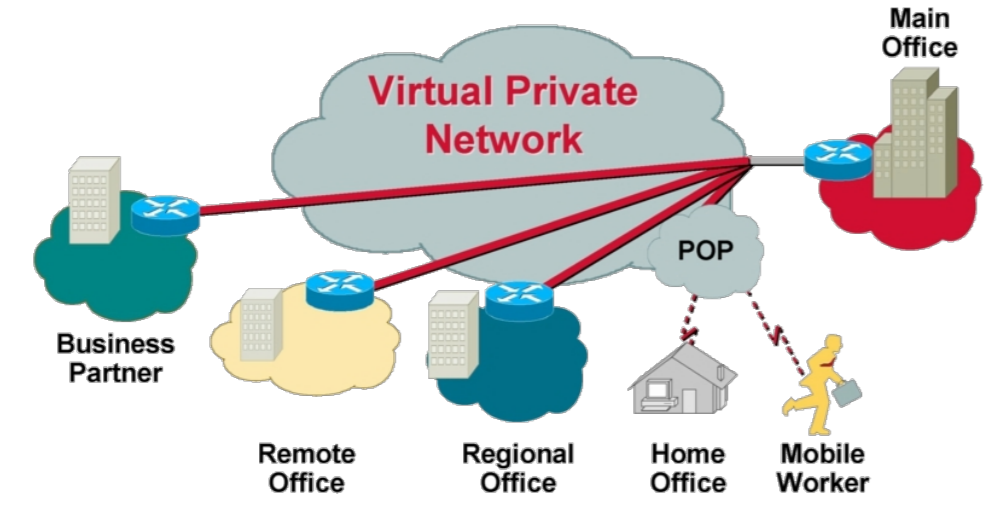
Security & Connectivity

Dragonfly is deployed on a secure tablet with multiple connectivity options including wireless, bluetooth and 4G.

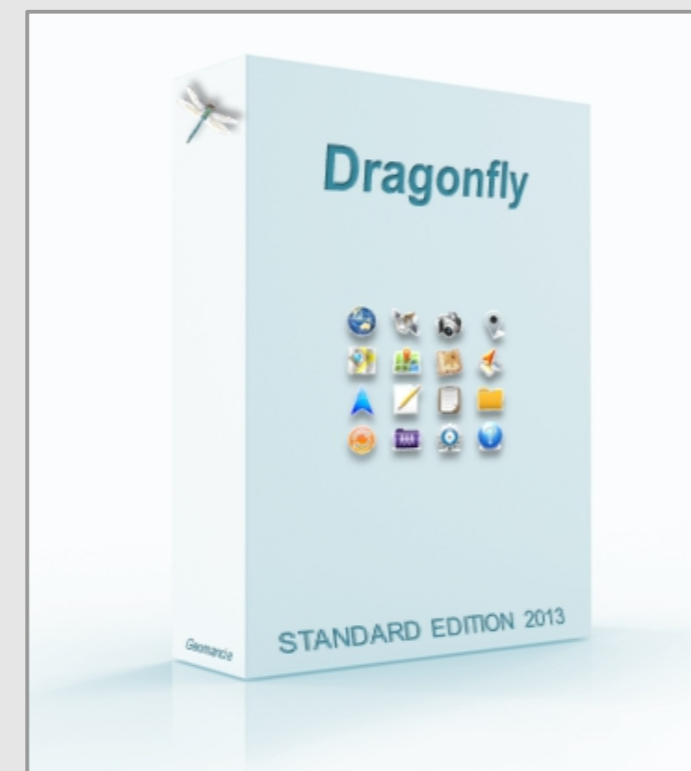
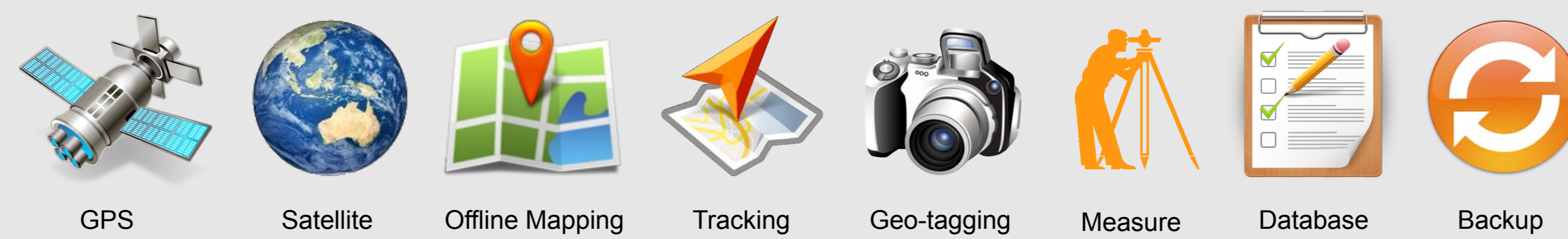
Dragonfly can also connect to a PC via micro USB.

Security options include screen lock, SIM card lock, passwords, administrator settings and hardware encryption.

There is also a Virtual Private Network client to enable secure connection to a corporate network.



An Integrated Software Suite



Dragonfly features an integrated suite of applications for field navigation, mapping and data recording, with an emphasis on offline capabilities.

The 21 discrete apps that make up the surveyors toolkit and 'bush office' are the core of a system designed to collect high quality geocoded field data.

By design, there is a degree of overlap or redundancy in the software suite so that should problems arise with a particular app, another may satisfy the surveyors key objectives.

For the sake of interoperability, Dragonfly reads and/or writes a range of widely used data formats including **csv, doc, pdf, xls, gpx and kml**.

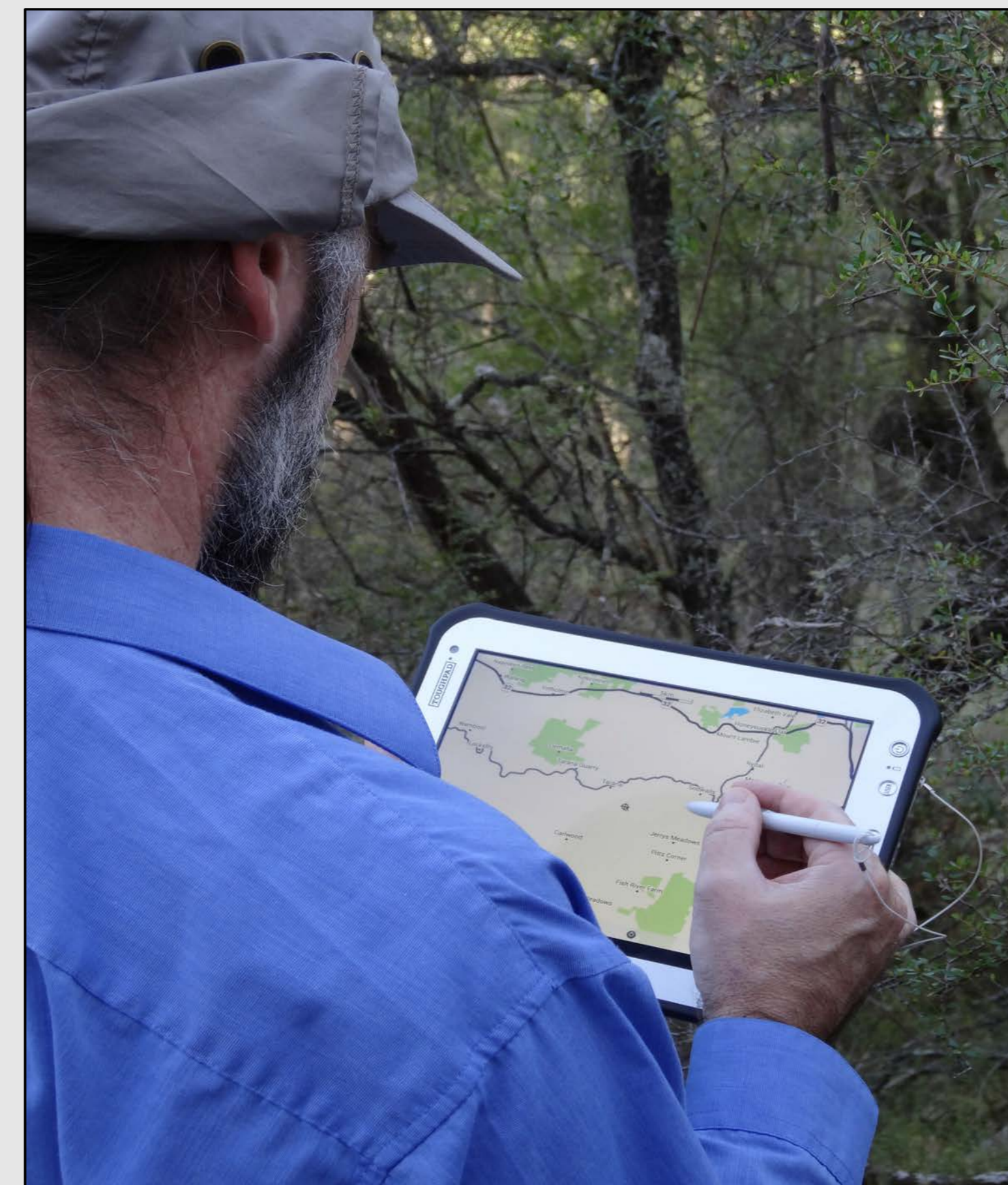
System Specifications

Dragonfly is deployed on military-grade hardware with an integrated software suite designed for navigation, field survey and mapping.

The Toughpad will run for up to 10 hours on battery power and can recharge to 90% in 3 hours or less.

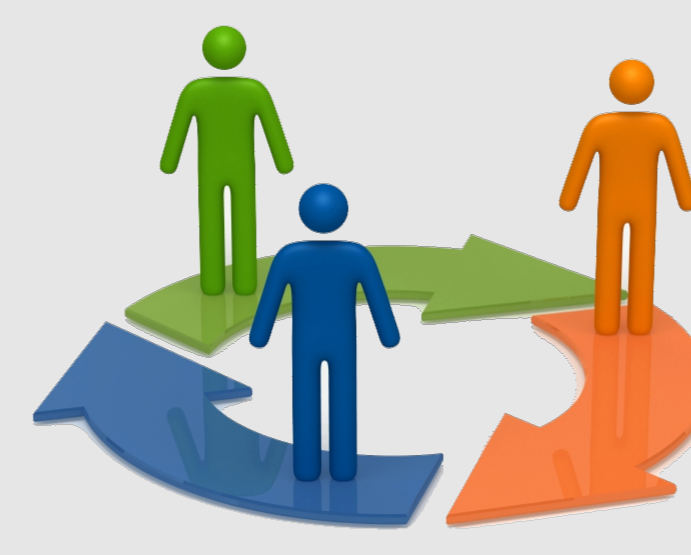
The anti-glare and anti-reflective screen is arguably the best sunlight-viewable screen presently available.

| | |
|----------------------|--|
| HARDWARE | <ul style="list-style-type: none"> Water and dust-resistant, designed to MIL-STD-810G engineering standards: 1.2m drop, shock, vibration, rain, dust, sand, altitude, freeze/thaw, high/low temperature, humidity, IP 65, operating environment -10°C to 50°C, 30% to 80% RH Capacitive multi touch daylight-readable screen (500 nit), anti-reflective and anti-glare screen treatments, with stylus digitizer Dual Core CPU 1.2 GHz, 1 GB main memory, 16 GB flash memory 266.3 mm (W) x 17.5 (D) x 212.0 mm (H), 0.993 kg Wi-Fi and Wi-Fi hotspot router Bluetooth v2.1 Mobile broadband MicroSD, MicroUSB, microHDMI, stereo jack 3G with SIM (SIM not supplied) GPS and digital compass |
| CONNECTIVITY | <ul style="list-style-type: none"> Connect to PC Bluetooth v2.1 Mobile broadband Wi-Fi and Wi-Fi hotspot router 3G with SIM (SIM not supplied) MicroSD (B) and adapter (C), MicroUSB (D), microHDMI (E), stereo jack |
| POWER SUPPLY | <ul style="list-style-type: none"> Replaceable Li-Ion battery pack Up to 10 hour battery operation depending on use Charging time for 90% battery: 3 hours on, 2.5 hours in sleep mode AC transformer LIND car charger |
| NAVIGATION | <ul style="list-style-type: none"> Online and offline map navigation tools Automatically record latitude and longitude Voice-assisted navigation where Wi-Fi or 3G is available Microphone and speaker for audio recording and playback 2MP webcam and SMP rear camera with LED flash, auto focus and geo-tagging Video recording |
| RECORDING | <ul style="list-style-type: none"> Includes a Field Note recorder designed for rapid site observations Includes a Field Survey database designed for systematic profile-based data recording, including linked photos, video and audio Survey data can be resili-geo-referenced, backed-up and synchronised to a centralised database that can be accessed by multiple field teams and office personnel Satellite, terrain and road network maps, depending on connectivity GPS-enabled applications can record sites and routes in formats that can be read in Google Maps, Google Earth or a Geographic Information System Supports a range of spatial data formats (kml, pdf, gpx, abcd) Automatic mapping of geo-tagged photo points All user-generated data is automatically copied to the Dragonfly file directory The entire Dragonfly system is configured for manual back-up to an external SD card Field survey records can be synced with the cloud Log-in and user accounts with password protection Embedded security processor for hardware encryption QuickSec VPN Enterprise-Grade FIPS Certified Mobile Security Kensington cable lock slot |
| MAPPING | <ul style="list-style-type: none"> GPS-enabled applications can record sites and routes in formats that can be read in Google Maps, Google Earth or a Geographic Information System Supports a range of spatial data formats (kml, pdf, gpx, abcd) Automatic mapping of geo-tagged photo points All user-generated data is automatically copied to the Dragonfly file directory The entire Dragonfly system is configured for manual back-up to an external SD card Field survey records can be synced with the cloud Log-in and user accounts with password protection Embedded security processor for hardware encryption QuickSec VPN Enterprise-Grade FIPS Certified Mobile Security Kensington cable lock slot |
| BACKING-UP | <ul style="list-style-type: none"> Field survey records can be synced with the cloud Log-in and user accounts with password protection Embedded security processor for hardware encryption QuickSec VPN Enterprise-Grade FIPS Certified Mobile Security Kensington cable lock slot |
| SECURITY | <ul style="list-style-type: none"> 3 year limited warranty on hardware QuickSec VPN Enterprise-Grade FIPS Certified Mobile Security Kensington cable lock slot |
| WARRANTY | <ul style="list-style-type: none"> 3 year limited warranty on hardware |
| CUSTOMISATION | <ul style="list-style-type: none"> Customised maps can be loaded into the system for navigation or use as backdrops for field surveys. Maps can include satellite imagery, topography, land tenure, survey site locations, travel routes, etc. Customised survey forms can be pre-loaded for monitoring programs, cultural site recording, condition assessment, vegetation surveys or threatened species surveys, depending on client needs. |



10" Toughpad with sunlight-viewable screen and stylus

Designed for Workgroups



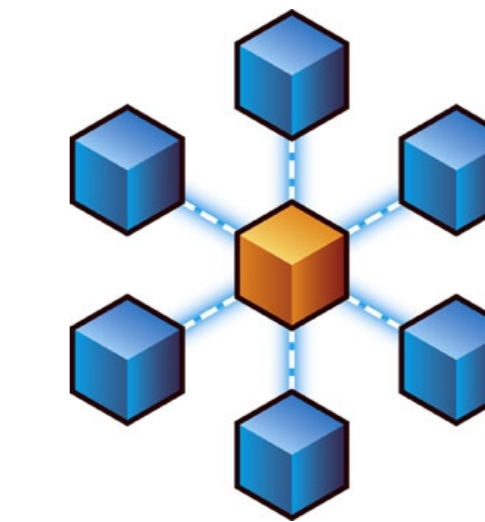
Dragonfly is designed to facilitate data sharing within workgroups and between the office and the field.

Sharing options include email, web, cloud storage and tablet to PC connectivity.

Database designs can be easily shared across Dragonfly workgroups and field data can be shared using Google Docs.



Automated Data Management



Dragonfly simplifies data management.

The system automatically aggregates user-generated data into a central file folder with an intuitive file structure.

On recharging, Dragonfly then automatically copies user data to an external SD card in a time-stamped folder.

Other backup options can also be configured depending on user preferences.



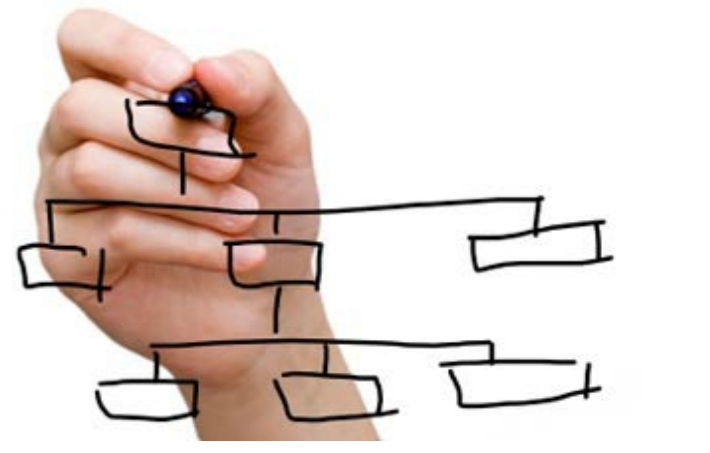
Customisable & Reconfigurable



Dragonfly can be readily customised to meet user requirements by including particular Android applications, databases, field guides, maps and much more.

The interface, file management protocol and backup construct can all be easily reconfigured.

Dragonfly can change as user needs change.



On-board Help



Dragonfly is easy to use.

Step-by-step instructions for each application are instantly available via the on-board help function.

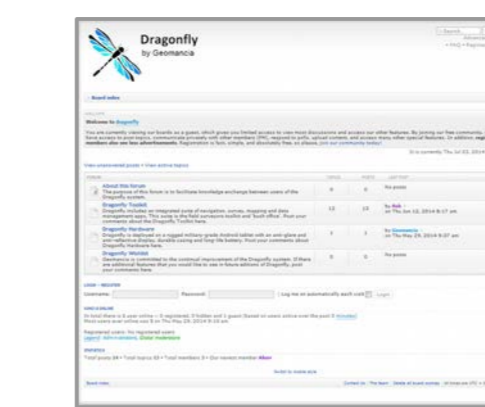
A printed Field Manual is also part of the Dragonfly kit.

PDF user manuals for individual apps are also included in the file system.

The Toughpad even incorporates a hardware diagnostics tool.



Training & Support



Dragonfly is fully supported.

Single-day introductory courses are designed to meet the needs of individual work groups while two-day advanced courses cover all of the Dragonfly apps and the internal workings of the system.

Users can access the free online Dragonfly Forum.

Geomancia also provides tailored support packages which can include ongoing phone support.

Dragonfly Forum
dragonfly.freeforums.org



Technology Partnerships



Angela M'Cauley B.Sc.
Project Director, Geomancia

Dragonfly is supplied under a Technology Partnership Agreement (TPA) that allows Geomancia to build the Dragonfly system for and on behalf of the client.

The TPA is a simple, plain language agreement that specifies the nature of goods and services to be provided, along with expenses and timeframes.

Please contact our Project Director, Angela M'Cauley, to discuss how Dragonfly can work for your team.

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Dragonfly is available now!

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