

EM Spectrum

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radio microwaves infrared light ultraviolet x-ray gamma rays
----- > increasing frequency (all photons)

How a photon can interact with matter depends on frequency.
Radio and microwave – molecular rotations/ torsions frequencies (less likely)
infra red – molecular vibration (more likely)
Light – atom's electrons' energy state

IR – is directional
Bluetooth(radio) – not directional, can go through walls

Programming Bluetooth and IR done with Exchange Manager subsystem
Objects can be registered with the exchange manager in one of the three ways:
1) By creator ID of application that is supposed to handle that kind of object
2) By MIME type
3) By file extension

Example:

```
Err error = ExgRegisterdatabase(myCreatorID, exgRegExtensionID, "txt",  
                                "Text file", 0);  
// exgRegTypeID to register MIME types  
// textdescription up to you  
// almost always 0 exg unwrap
```

Says my application can handle .txt files

Once your record type has been registered with the exchange manager, then a beam comes in with this type of data, the exchange manager generates the following three events which are sent to your application.

```
sysAppLaunchCmdAskUser // by default asks user to receive beam  
sysAppLaunchCmdReceiveData // you should handle, read bytes store in one of  
// your databases  
sysAppLaunchCmdGoto // after record received, what should application  
// do (maybe display that record)
```

Sending data: Basic steps

- 1) Init an ExchangeSocketType structure
- 2) Call ExgPut to begin transfer
- 3) Call ExgSend within a loop to send bytes
- 4) Call ExgDisconnect