

PRACTICALITIES OF ORDERING AND ACQUIRING VHR IMAGERY

A review of operational
experience

Richard Chiles, Nicky Thurston, Ruth Pottinger, David Morten

NPA Group

BARSC VHR FORUM, March 04



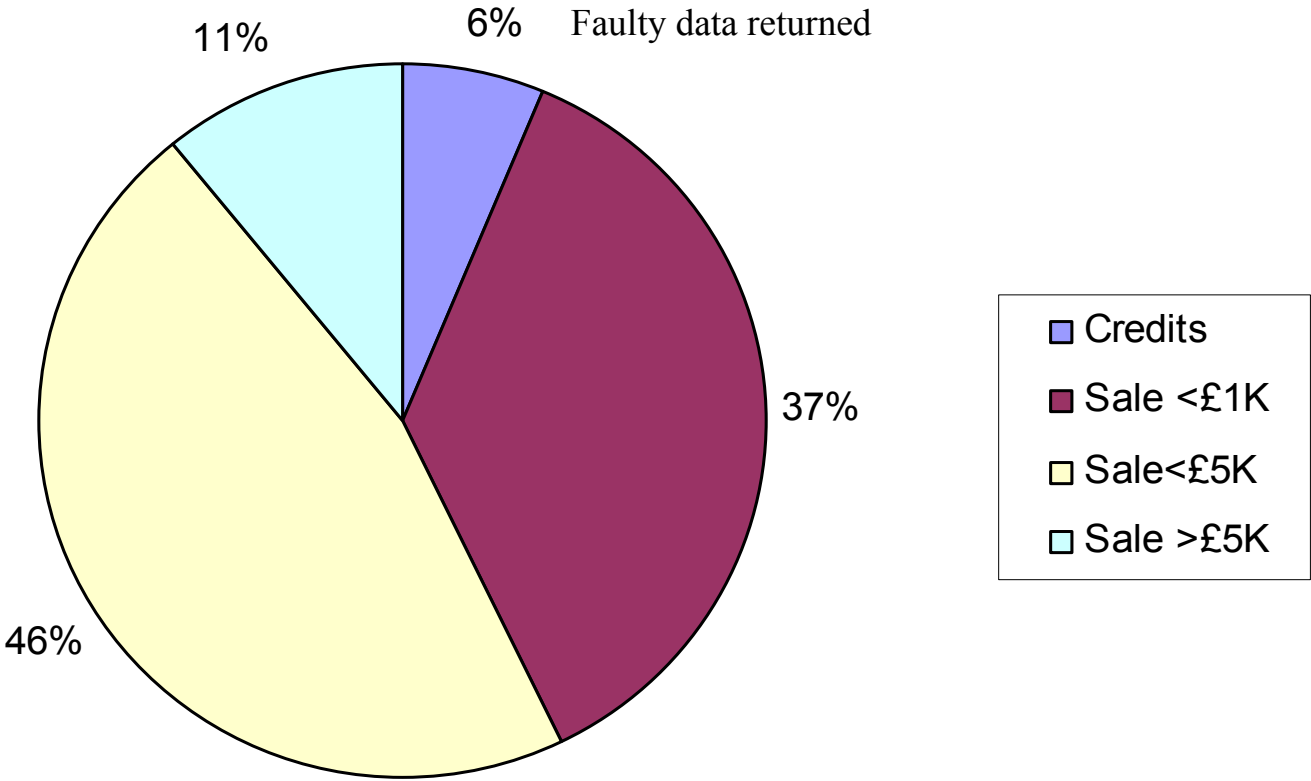
Practicalities - Experience

- Behind the scenes view for end users
- Not a consideration of technical capability
- Purely commercial & operational
- Unbiased with respect to providers
 - May reveal some cupboardised skeletons
- Review of several hundred projects
- Statistics from Ikonos & Quickbird
- No pretty pics!

VHR DATA & WHY

- **Ikonos & Quickbird**
 - Programmability and resolution
- **SPOT 5**
 - Area coverage, DEM and some cost advantages
- **EROS**
 - Access & response restricts utility for small projects
- **Russian 3-1m.**
 - Availability at the time, variable quality & cover, registration/geometry
- **Old US Defence - Corona**
 - Rare advantages seen, except historic and cost
- **IRS** - doesn't make the resolution @6m. yet.

Distribution of Sales Values (& Credits)



Locating Targets

- Often requires geographical research at NPA
 - football stadia, bat caves on TV etc.
- Lack of standardisation between catalogues
 - Accept .shape files or not, use of multiple q/l's
- Different levels of geographic presentation
 - quick-looks need to be geo-referenced by NPA

Planning New Cover

- Linear routes – roads, pipelines present specific problems
- Constraints on point spacing in order criteria – eg. min 5km.
- Terrain type vs. incidence angles
- Solar illumination – optimisation for different applications

DEM

- Quickbird – not available
- Ikonos - cost is an issue & still not building heights as with Lidar
- SPOT more cost-effective and almost as efficient, but SRTM is strong low-cost competition

Commercial Considerations

- As ever - trade off of cost vs. area cover and detail
 - But costs are variable depending on geographic location and minimum area requirements
- There are circumstances where 0.6m data are cheaper than 2.5m!
- Programming fees may influence choice of source
- For large areas, must question if 1m. is really required technically

Recent Example

- Remote desert area with high relief
- Scenes already in archive but need two having differing seasons and incidence angles
- Lower cost to programme one new scene with correct parameters
- No need to buy the whole of this scene to cover project area

Problems for Distributor

- These *should* be transparent to the end user!
- Differences in pricing structure
 - in some cases may vary depending on region of world, country of interest, domicile of user
 - Price lists are a nightmare and a moving target
 - Some are published – some are not
 - Also different minimum area purchases
 - makes it very difficult for both the distributor and end user
- Location of archive and varying performance of groundstations
 - Can dramatically affect delivery times and costs
 - Sometimes source is not initially known
 - FTP resource not universal

Commercial Complexity; Conclusions

- Have the providers tried to be too clever?
- Or are the complex networks really a result of commercial pressure applied by NIMA/DoD?
- Is this the best way forward?
 - Would we have the satellites at all without NIMA/DoD?
- The end user really does need the help of the distributor –
 - it doesn't cost you any more
 - we are more likely to identify a costly mistake
 - know the foibles of the supplier
 - find a way to save money
 - reduce delivery times!