



STAR TIGER

Technology Report
Dr Christopher Mann – StarTiger Project Manager
25th October 2002 – ESTEC



Confidentiality

- This meeting is project confidential
- Attendance by StarTiger, CCLRC, and ESA employees only
- Results are subject to ongoing patent applications
- Anybody not meeting this criteria please make themselves known now!





StarTiger - Technology

StarTigers ultimate goal was to realise an colour THz imaging array in four months

The task set was to capture an image of a hand
This would require key technology developments in the following areas:

- Complex detector circuitry design
- Complex fabrication processes
- Scanning optics design
- System Control/Data Acquisition

Demonstrator Block Diagram



Fresnel lens design using an artificial material based on silicon (ii)

The Artificial Dielectric Material One Layer Of The Fresnel Lens

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Future Technologies

Room temperature bolometers for full 2D array.

- RAL expert* determined that RT bolometers are feasible
- Consultation with Qinetiq infrared bolometer group provided new approach S/N ratio > 100 @ RT
- StarTiger manufactured by thermoelectric material for coating Silicon wafers (Patent pending)

*Dr Bruce Swinyard

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Conclusions

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