

**TICRA**

[www.ticra.com](http://www.ticra.com)

# TICRA Tools

SEAMLESS INTEGRATION  
OF ANTENNA ANALYSIS  
AND DESIGN TOOLS



## TICRA Tools

GRASP



Reflector  
antennas

ESTEAM



Scattering  
by large  
structures

CHAMP 3D



Feeds and  
waveguides

QUPES



Quasi-  
periodic  
surfaces

POS



Advanced  
payload  
antennas

UQ



Uncertainty  
quantification

TICRA Tools is the most effective framework to simulate antenna performance during the early design phase, manufacturing, and even after implementation.

No matter if you work with large radio telescopes scanning the universe, complex satellite antennas that enable communications, or small terminals for internet access at sea, you have everything you need in a single, intuitive package.

TICRA Tools – key features and benefits:

- Six products, one user interface
- Use each product independently
- Synergy between products – combine methods and analyse efficiently
- Flexibly activate and deactivate products

[www.ticra.com/ticratools](http://www.ticra.com/ticratools)

# Measurement systems and software



ed\_field -- Power Spectrum

All antennas will eventually need to go through a validation test phase. The test range providing the highest accuracy is the spherical near-field type, with a subsequent transformation of the data to the far field. SNIFT's claim to fame is the field transformation including probe correction, which accounts for the probe pattern and cross-polarisation characteristics, and has been the tool of choice for more than four decades.

If the measured data deviate from the predictions, it is often easier to identify the cause of the discrepancy by inspecting the extreme near-field of the antenna. To this end, we developed DIATOOL, which accurately reconstructs this field from the measurements.

$$\hat{e}_{rlhc} = \frac{1}{\sqrt{2}} (\hat{e}_{co} - j\hat{e}_{cx})$$
$$\hat{e}_{llhc} = \frac{1}{\sqrt{2}} (\hat{e}_{co} + j\hat{e}_{cx})$$