

SEU PROJETO | NOSSO DESAFIO



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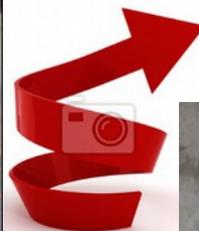
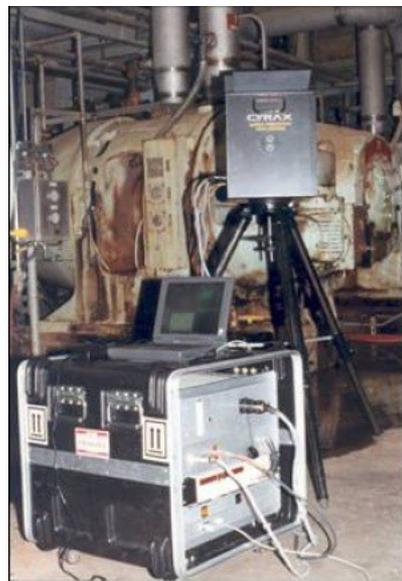
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# SOLUÇÕES DE LASER SCANNER 3D

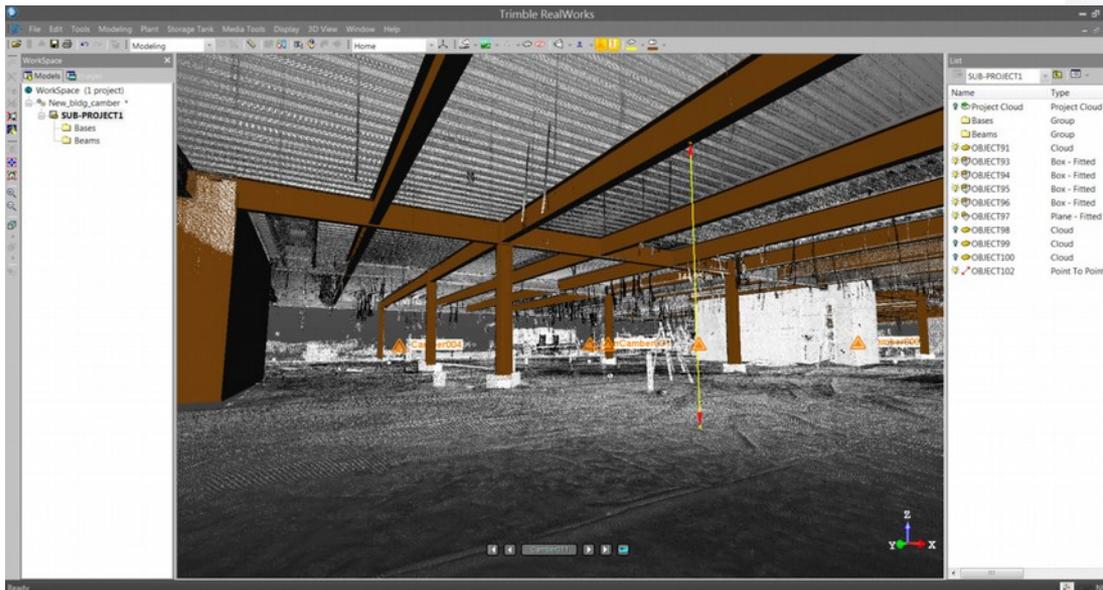
# Evolução dos scanners terrestres estáticos

- Desde os anos 2000 até hoje, os equipamentos laser scanner vem evoluindo consideravelmente em todos os aspectos, seja em precisão, alcance e velocidade de medição, associados a importantes aspectos como dimensões e pesos.



## Revolucionária e versátil solução em Laser Scanner!

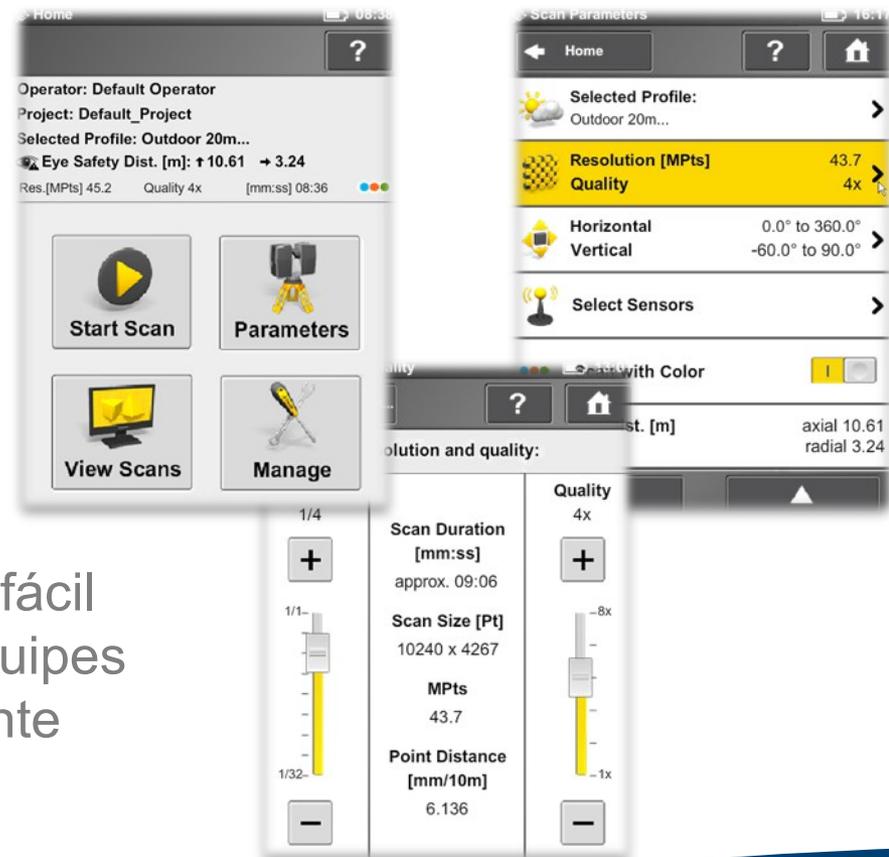
- Compacto e Leve
- Eficiente
- Econômico
- Fácil de Usar



# Display intuitivo sensível ao toque

Controle de todas as funções através da interface de usuário simples no próprio instrumento

- Interface simples com o Usuário
- Tela sensível ao toque
- Sem necessidade de cabos e controladores



A Interface de usuário intuitiva e fácil de aprender, ajuda a obter as equipes prontas para trabalhar rapidamente

Bússola integrada e altímetro no TX5 Trimble adicionam informações direcional e de altura para os escaneamentos além do Duplo compensador integrado no equipamento

- Facilita o processo de auto-registration
- Diferencia as cenas umas das outras
- Redução no numero de alvos necessários

Os usuários têm mais informações disponíveis para acelerar o processamento e criação de projetos.



**Temperature**



**Inclinometer**



**Compass**



**Altimeter**



# O Laser Scanner será o futuro da topografia?

Acreditamos que o futuro da topografia será a capacitação e especialização dos profissionais do setor, porem vemos hoje a fusão de tecnologias, onde encontramos no mercado estações totais com ferramentas de escaneamento a laser e Laser Scanner com ferramentas de estações totais.





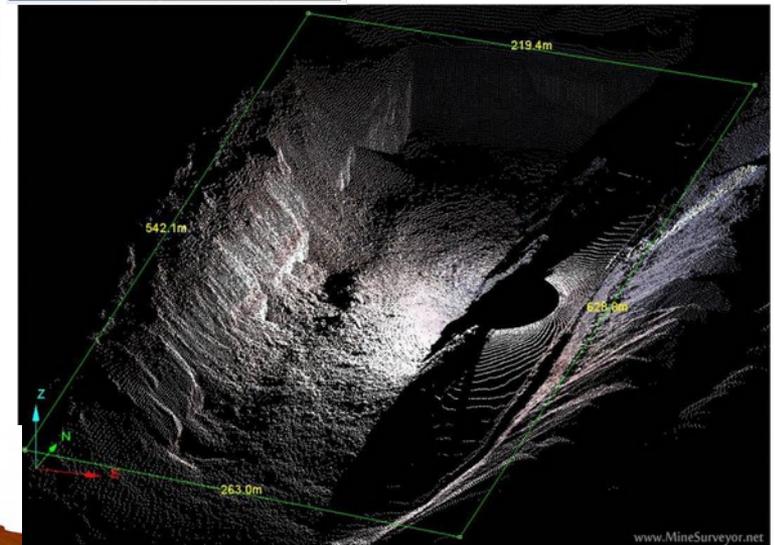
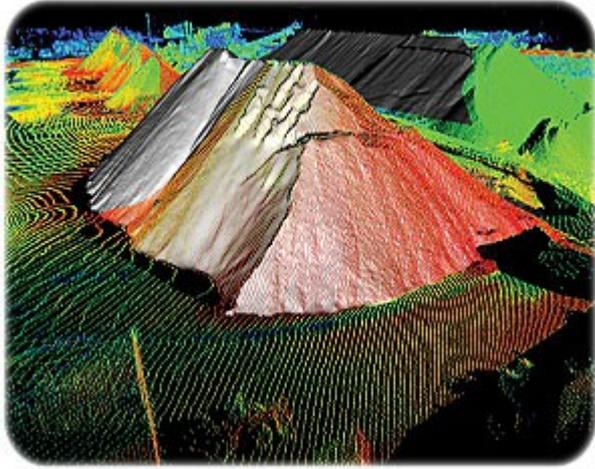
# PRINCIPAIS APLICAÇÕES E SOLUÇÕES DE LASER SCANNER 3D



# TOPOGRAFIA / MINERAÇÃO / GEOLOGIA

## MundoGEO

- **Scanner** : Topcon / Optech
- **Software**:
  - ✓ Gexcel – 3D Reconstructor
  - ✓ Innovmetrics – PolyWorks
  - ✓ Trimble – Real Works

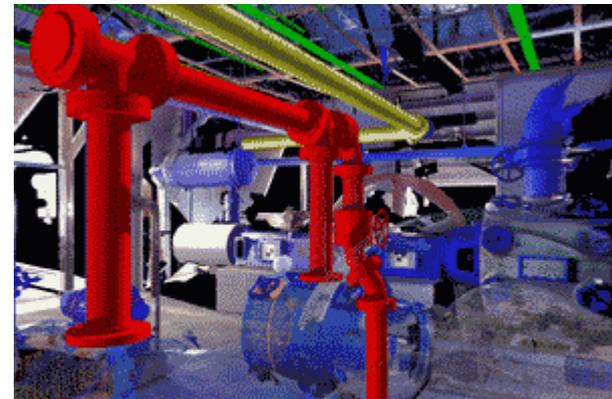
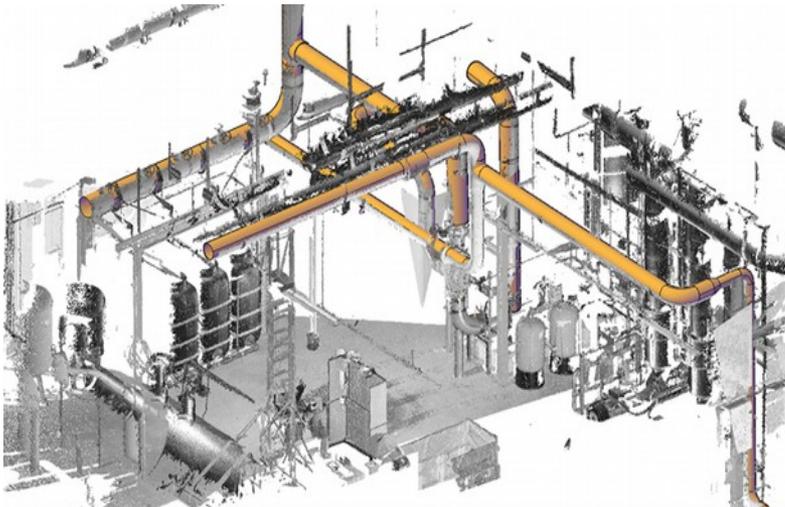




# INDUSTRIAL - ÓLEO, GÁS, QUÍMICA E PETROQUÍMICA

MundoGEO

- Scanner : Topcon / Trimble
- Software:
- Trimble – Real Works
- Trimble – LaserJet Suite
- Kubit – Point Cloud
- Kubit – Point Sense Plant
- Kubit – Virtual Survey



PointSense Plant

## Interface da nuvem de pontos com softwares CAE e CAD.

- Laser Scanner Trimble TX-5 possui interface direta sem plugin com os produtos autodesk. AutoCad, Revit, NavisWorks, Plant Desing.



Autodesk

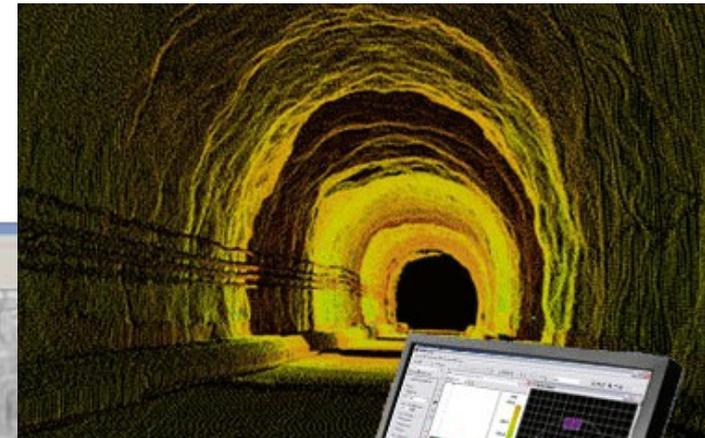
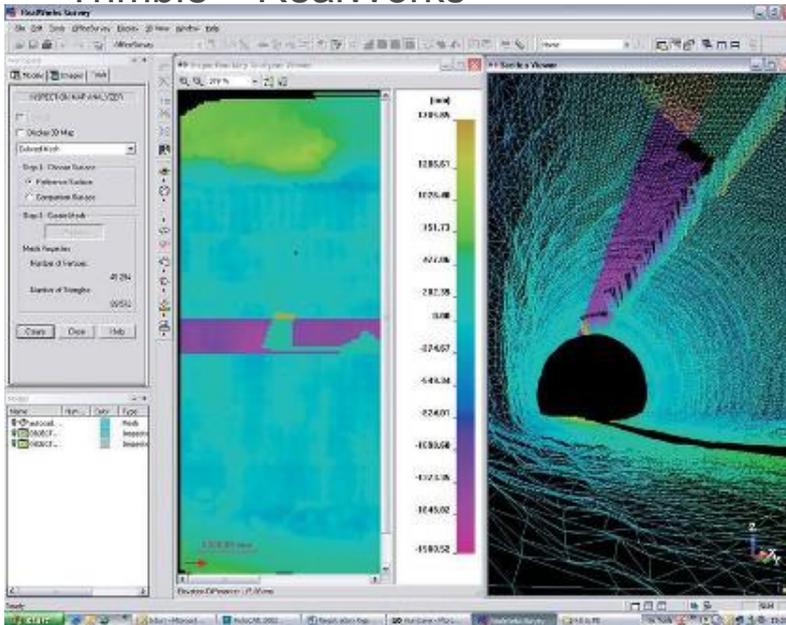


- Trimble LaserGen: É um poderoso software que faz a interface (Plugin) dos dados nativos de laser scanner com os principais softwares de engenharia do mercado.
- LASERGen for Microstation and PDS
- LASERGen for PDMS
- LASERGen for AutoCAD
- LASERGen for SmartPlant review
- LASERGen Viewer

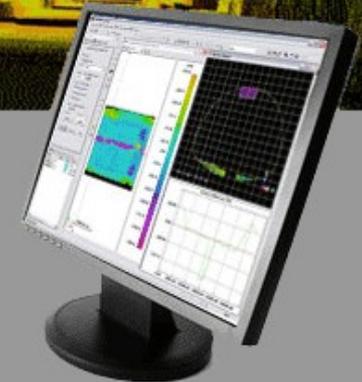
# TUNEIS / MINAS SUBTERRÂNEAS

MundoGEO

- **Scanner :** Topcon / Trimble / Optech CMS
- **Software:**
  - ✓ Gexcel – 3D Reconstructor
  - ✓ Innovmetrics – PolyWorks
  - ✓ Trimble – RealWorks



TRIMBLE  
REALWorks

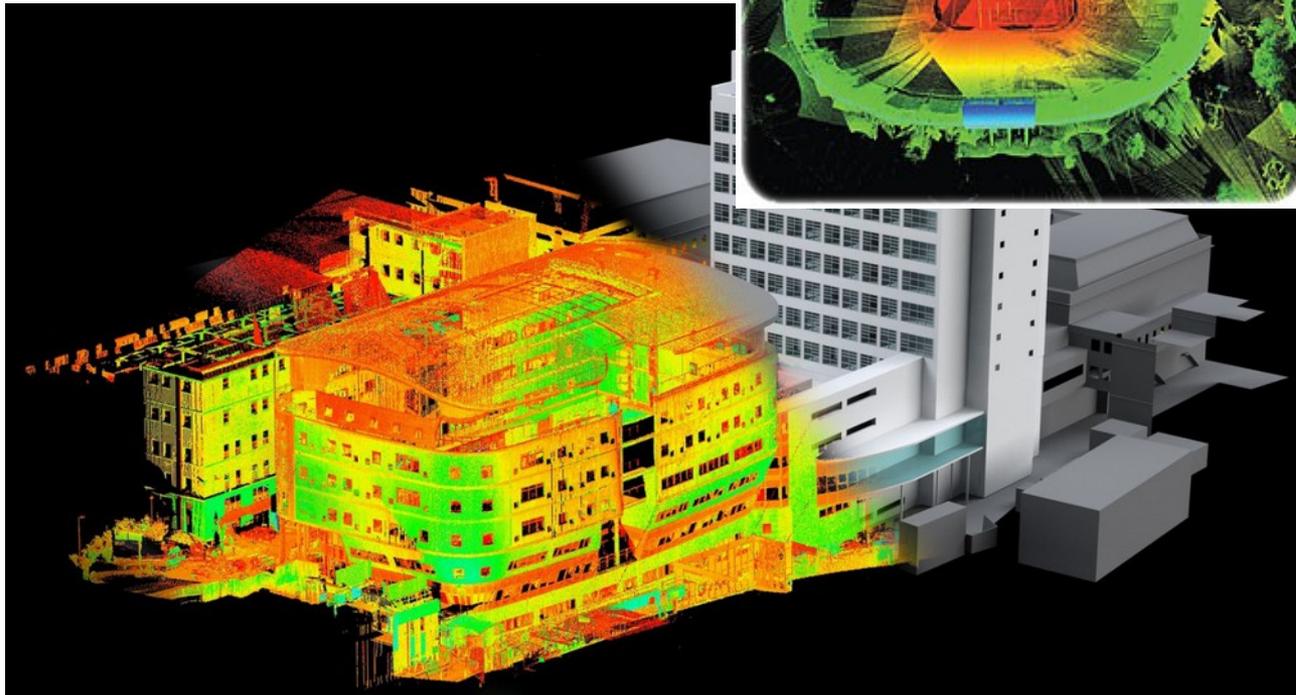
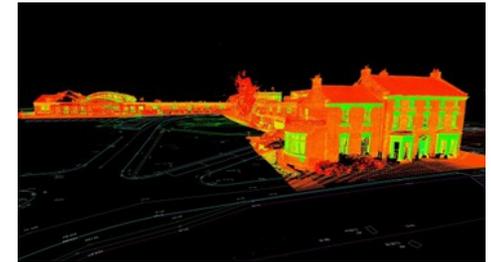
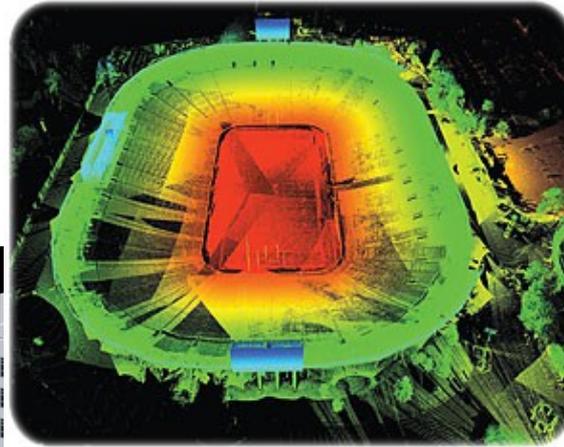




# ENGENHARIA CIVIL / BIM

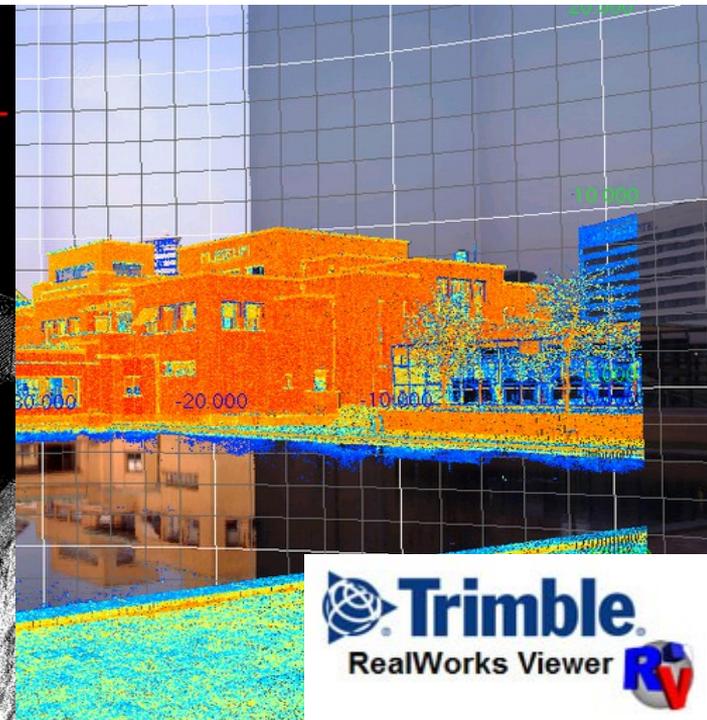
MundoGEO

- **Scanner :** Topcon / Trimble
- **Software:** Gexcel – 3D Reconstructor
- ✓ Trimble – Real Works
- ✓ kubit – Point Cloud
- ✓ Kubit – Point Sense Plant

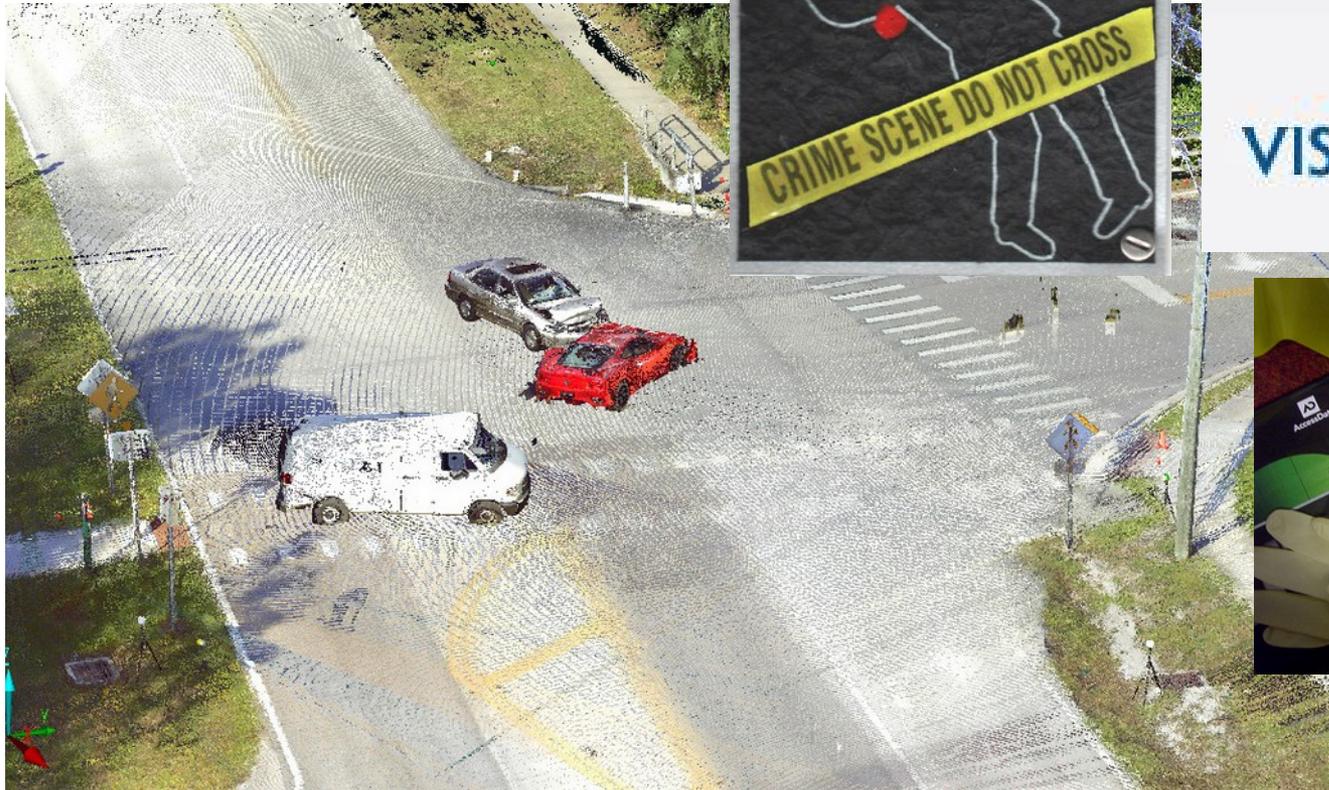


MundoGEO

- **Scanner :** Topcon / Trimble
- **Software:**
  - ✓ Gexcel – 3D Reconstructor
  - ✓ Trimble – **Real Works**



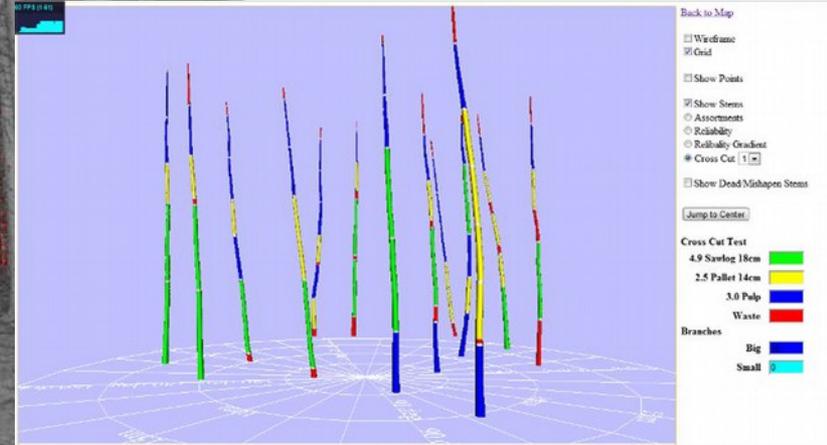
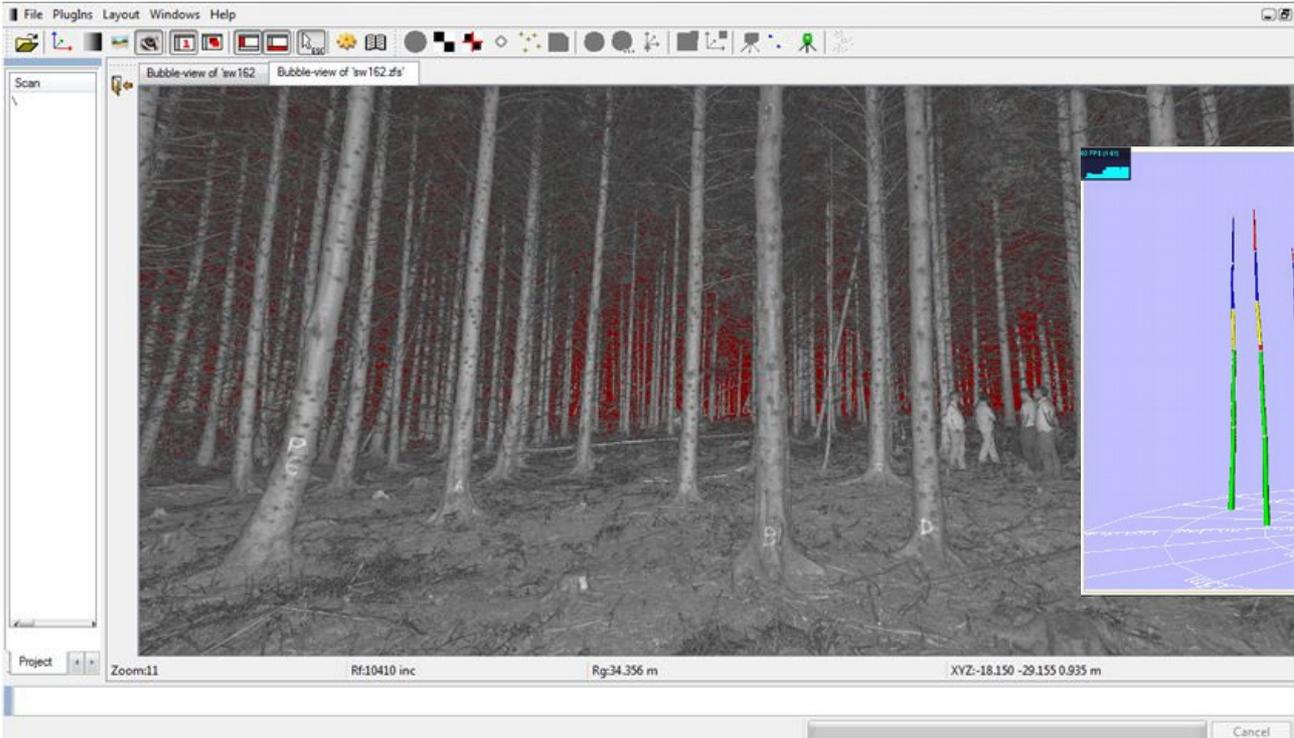
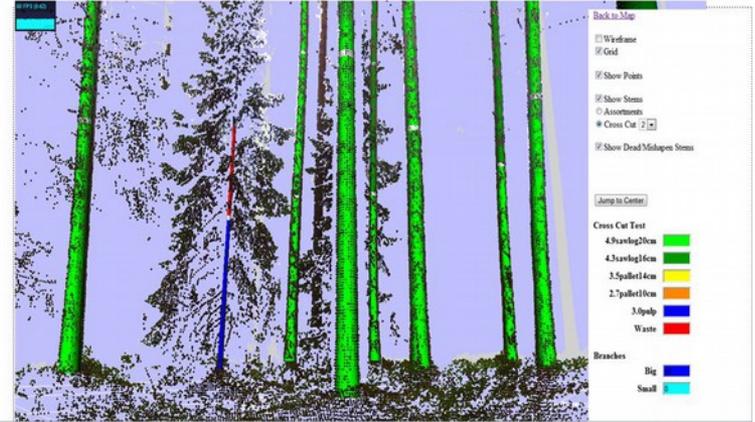
- Scanner :Topcon / Trimble
- Software:
- ✓ Trimble – Visual Statement





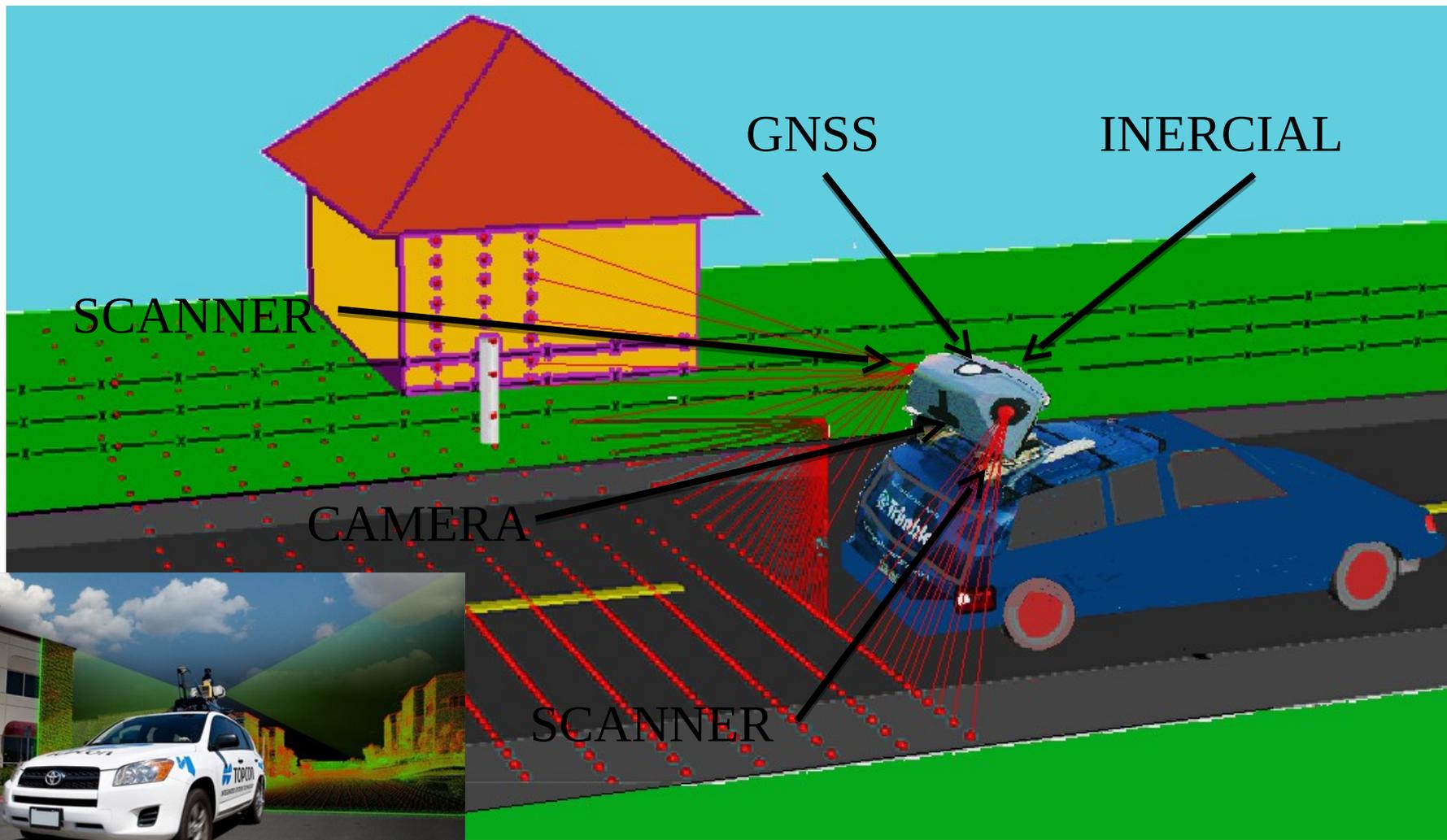
# FLORESTAL

MundoGEO





# LASER SCANNER 3D MÓVEL





Câmeras digitais

Laser scanners



IMU - Inertial navigation systems

Receptores GNSS



Distance measurement instruments

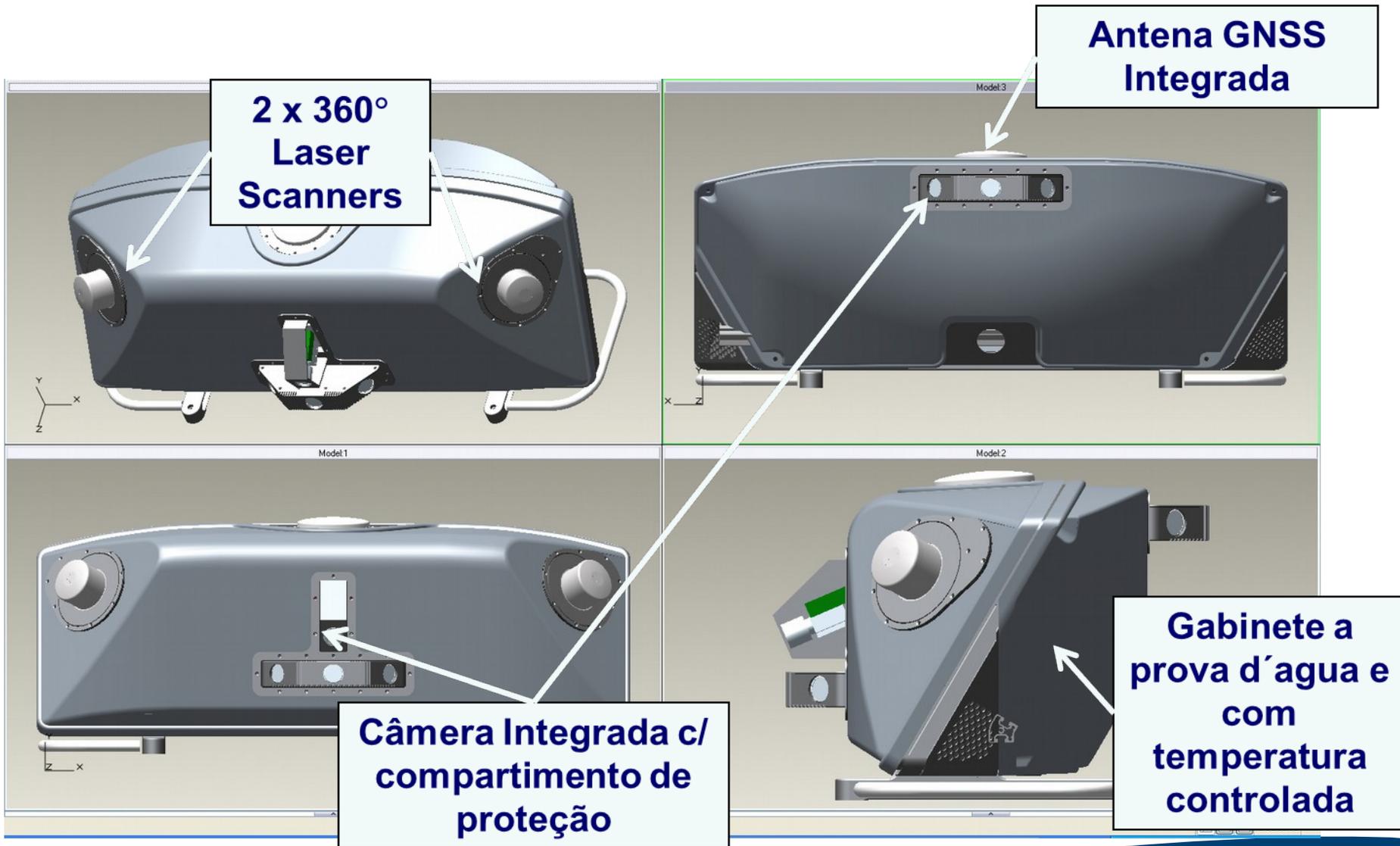
Central de controle do sistema

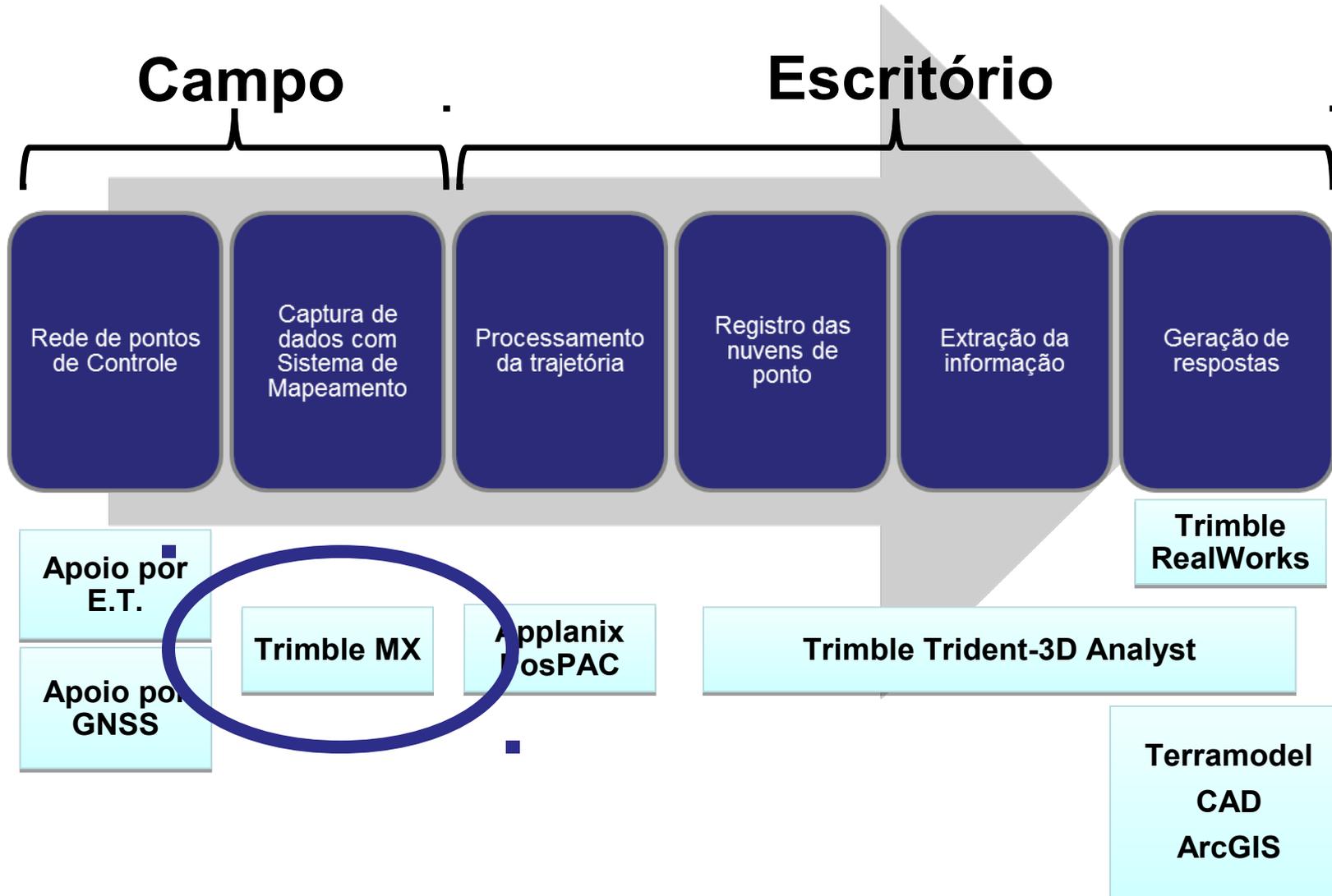


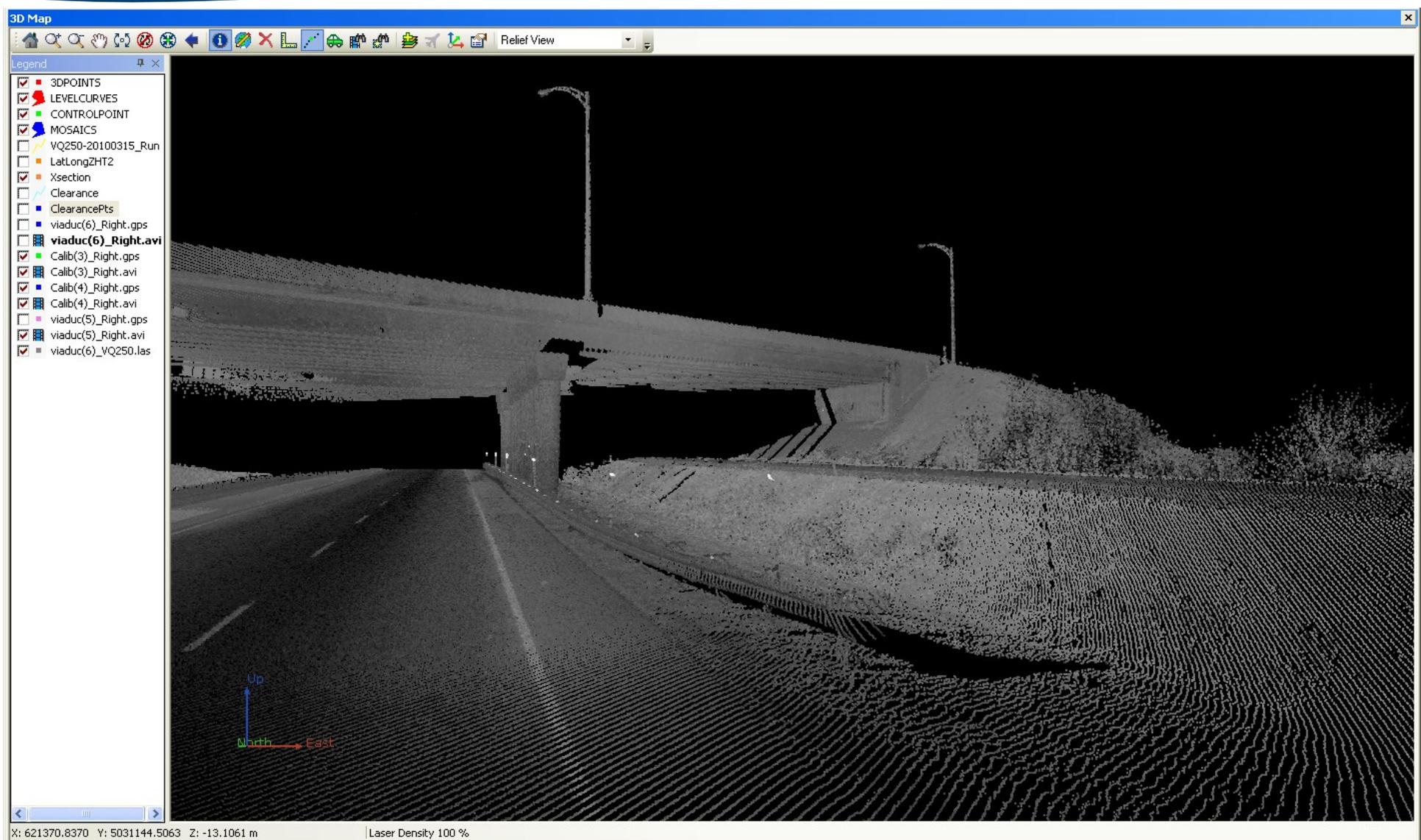
Multiplexer (sincronismo preciso dos instrumentos)

Software para captura de dados

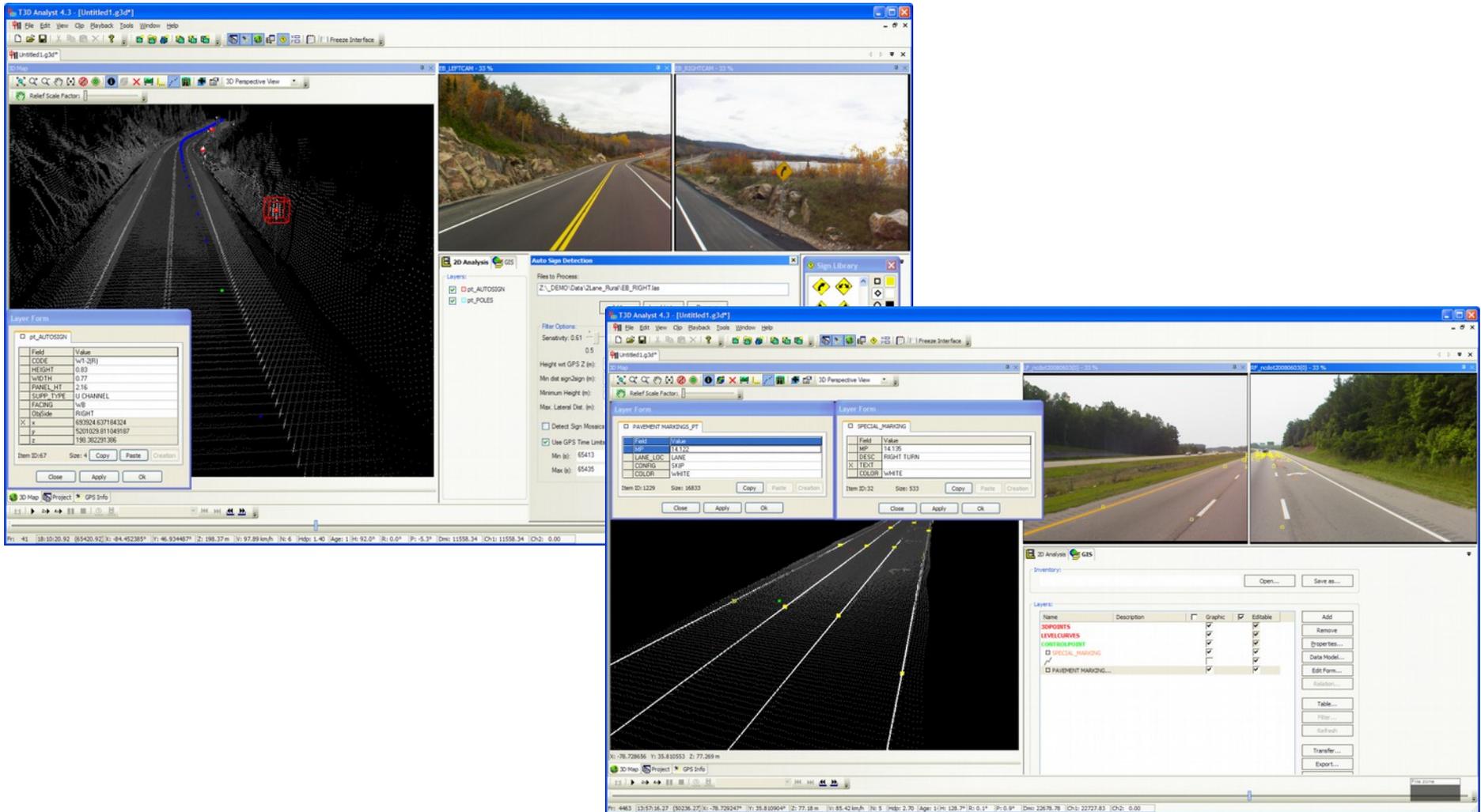








# DETECÇÃO AUTOMÁTICA DE SINAIS, MARCAÇÕES, POSTES E ETC.



The screenshot displays the T3D Analyst 4.3 software interface, demonstrating the automatic detection of road signs and markings. The main window shows a 3D perspective view of a road with a grid overlay. A 2D Analysis window is open, showing the 'Auto Signs Detection' settings, including a list of files to process and filter options. A 'Sign Library' window is also visible, showing a list of detected signs. The 2D Analysis window includes a table of detected items:

Field	Value
MP	14.136
LANE_ID	LANE
CONSP	SNIP
COLOR	WHITE

Another table in the 'SPECIAL\_MARKING' window shows:

Field	Value
MP	14.135
DESC	RIGHT TURN
TEXT	
COLOR	WHITE

The interface also includes a 'Layer Form' window for editing detected items, a '3D Map' window with GPS info, and a 'Layers' panel at the bottom right showing a list of layers including '3DPOINTS', 'LEVELCURVES', 'CONTOURPOINTS', 'SPECIAL\_MARKING', and 'PAVEMENT\_MARKING...'. The status bar at the bottom provides project coordinates and scale information.



OBRIGADO!!