

CAT® MINESTAR™ SYSTEM

# TERRAIN



NEXT GENERATION DRILLING, DRAGLINE,  
GRADING & LOADING GUIDANCE TECHNOLOGY



# TERRAIN

## MACHINE GUIDANCE, MATERIAL MANAGEMENT & SITE PLANNING

Cat®Terrain enables high-precision management of drilling, dragline, grading and loading operations through the use of advanced guidance technology. It increases machine productivity and provides you real-time feedback for improved efficiency.

Along with providing detailed in-cab machine guidance and machine positional information for equipment operators, Terrain makes a wealth of data available to mine managers and site planners—including up-to-the-minute machine location and operational status, progress toward completion of work plans and more.

Terrain gives machine operators the real-time guidance they need to do their jobs more safely and efficiently, while providing mine site managers with timely information and advanced tools to help them increase mine productivity, output production and profitability.



FLEET



TERRAIN



DETECT



HEALTH



COMMAND



With powerful tools that aid in everything from drill planning and blasting to ore control and mine planning, Terrain enables more timely and effective fact-based management of all drilling, dragline, grading and loading operations.

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### **PRECISION GUIDANCE FOR MACHINE OPERATORS**

Terrain gives machine operators a highly accurate, in-cab display of grade and drill plans. As the operator works, the display shows the exact position of the machine within its production area, along with progress against plan. This immediate feedback in the cab enables the operator to work more efficiently and effectively.

In addition, Terrain highlights avoidance zones and other critical information via the in-cab display, enhancing job site safety. It can also show the position of other equipment in the area, providing the operator with more complete awareness of the work environment for enhanced operational safety.

### **VITAL FEEDBACK FOR MINE MANAGERS**

Terrain enables production managers to monitor, track and accurately report on multiple mine processes. Using the office software, managers can track the amount and types of material moved versus plan, as well as an overview of drilling operations. Managers can view information by machine, within a production area or for an entire pit.



**Terrain combines on-board functionality for drilling, dragline, grading and loading with the new, fully integrated office software, enabling seamless management of multiple machine systems from a central location.**

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## **INTEGRATED MINESTAR SYSTEM OFFICE SOFTWARE**

Where multiple machine systems are in use, Terrain gives you a broader look at your entire operation, with the ability to “zoom in” for a detailed look at individual machine performance.

You can easily send design files to all types of machines, monitor machine location and status, and control, validate and distribute machine configuration files, all from a central office location.

In addition, the integrated software accepts machine measure-up data during commissioning and automatically transmits data to the office.





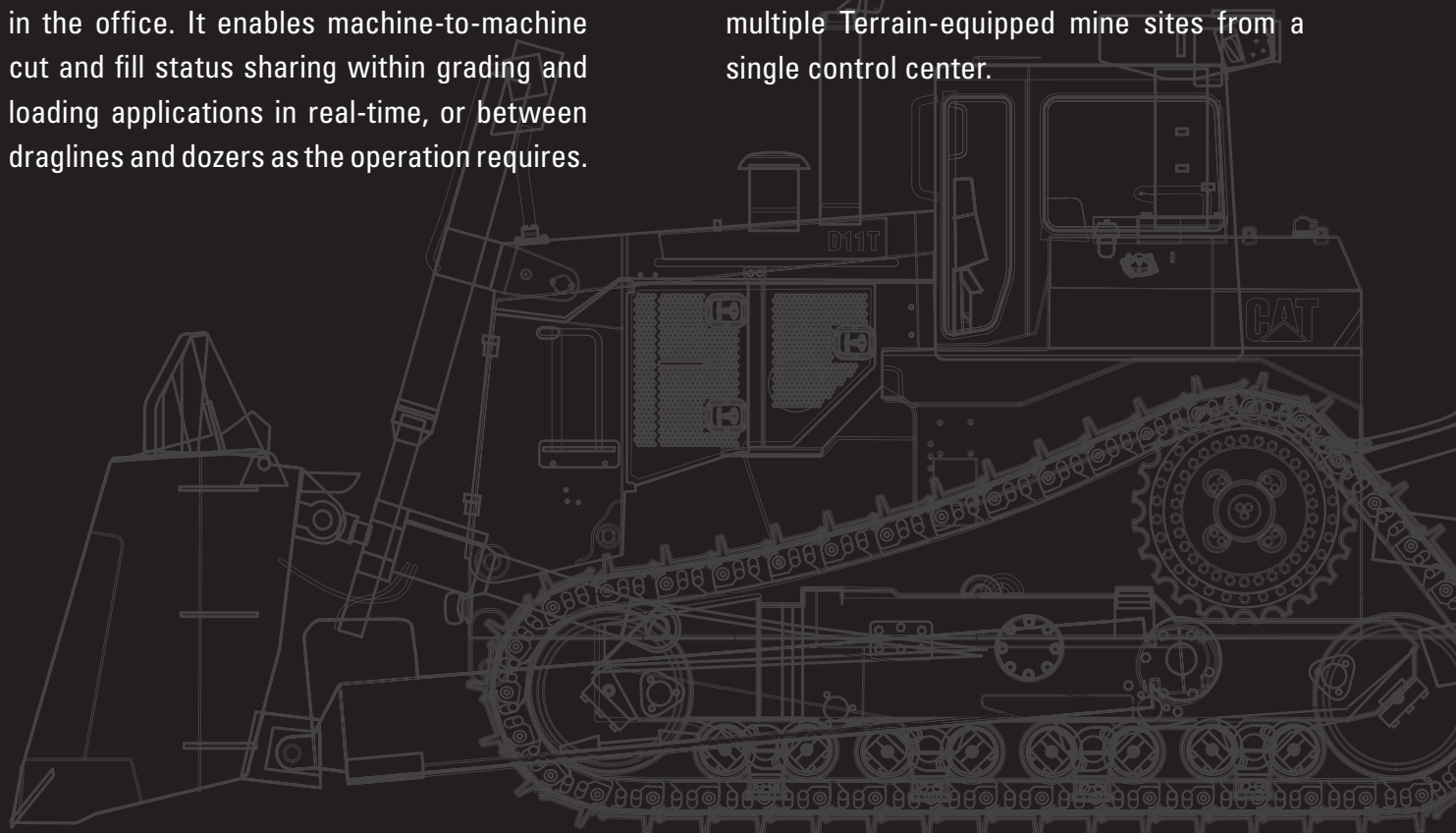
## TERRAIN CAPABILITY PACKAGES

**Productivity** – Allows tracking and analysis of machine utilization and productivity, by machine type and by operator.

**Position & Material** – Allows high-precision machine guidance systems to share position and job status information, both on-board and in the office. It enables machine-to-machine cut and fill status sharing within grading and loading applications in real-time, or between draglines and dozers as the operation requires.

**Data Share** – Allows Terrain to share data with other applications—such as competitive fleet management systems, data reporting systems and position monitoring systems—via an industry standard interface.

**Multi-Site** – Allows for management of multiple Terrain-equipped mine sites from a single control center.



# CAT® MINESTAR™ SYSTEM

**Terrain is one of a range of capability sets within the Cat® MineStar™ System, the industry's broadest, most thoroughly integrated mine operations and mobile equipment management system.**

The Terrain capability set shares data seamlessly with other Cat MineStar System technologies as part of a comprehensive, next-generation mining management system. Cat MineStar System capability sets can be used individually or in combination to create a comprehensive technology system, scalable and configurable to the needs of mining operations of any size, type or complexity.

With the ability to track, monitor and manage all types of assets, from fleet-level overviews down to individual machine details, Cat MineStar System gives you the in-depth information you need to manage all mining operations more safely, efficiently and productively.

For more information visit [cat.com/miningtechnology](http://cat.com/miningtechnology)



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