

Pioneering Seismic Innovation

Nicolas Renaud on Sercel's role in Energy and Marine Futures



Nicolas Renaud, VP Business at Sercel, shares insights on the company's mission to deliver cutting-edge seismic solutions for energy exploration, renewable integration, and marine operations.

Talking to Arun Kumar Singhal, Chief Editor of DEW Journal, he discusses innovations like ACCEL and Pathfinder, regional opportunities in APAC, and advancing sustainability in seismic data acquisition.



Accel: The world's first drop node - a breakthrough in land seismic

Sercel, which is part of Viridien, an advanced technology, digital, and Earth data company, is widely recognized as a global leader in seismic data acquisition. Could you give us an overview of the company's mission and its role in the energy & marine industries?

At Sercel, our mission is to provide innovative solutions that enable our clients to obtain highly accurate seismic data for a wide range of applications. This includes energy exploration, where seismic data helps uncover oil and gas reserves, as well as environmental monitoring, where we support the marine industry in tracking changes to ecosystems and maritime infrastructure. We believe our cutting-edge technology plays a pivotal role in improving the efficiency, safety, and sustainability of energy extraction and maritime operations.

As a company with a long history of innovation, can you tell us about some of the recent technological advancements Sercel has made in seismic data acquisition and their impact on energy exploration?

We are committed to pushing the boundaries of seismic data acquisition by providing our customers with the best technologies and high-quality services to help them carry out

their missions and meet the increasingly complex challenges of the energy sector. Our proven expertise, developed over decades, makes Sercel a key player in energy exploration. Whether it's through our advanced sensor systems, our innovative land or marine nodal solutions like ACCEL or GPR, our cutting-edge marine nodes including TPS (Tuned Pulse Source) or Bluepulse, or our services to accompany our customers throughout their project lifecycle, we ensure that our clients can operate with confidence and efficiency in even the most demanding environments. We're always looking ahead to anticipate the evolving needs of the industry and deliver solutions that drive success and sustainability in energy exploration.



GPR: Precision-led nodal solution for seabed operations

Recently, Sercel introduced the ACCEL land nodal solution, the world's first drop node. Could you tell us more about this innovation and its potential impact on seismic data acquisition for energy exploration?

The introduction of ACCEL marks a significant milestone for Sercel and the seismic industry as a whole. As the world's first land drop node, ACCEL is designed to simplify the deployment process while significantly improving data quality. Traditional land nodal solutions often require time-consuming and complex deployments, but ACCEL can be quickly dropped into place, offering high-resolution data without the need for large number of workers or heavy equipment. This means more efficient exploration campaigns, lower operational costs, and the ability to acquire detailed seismic data in even the most challenging environments. Additionally, ACCEL's quality control capabilities allow for real-time monitoring, making it a game-changer for energy companies in land



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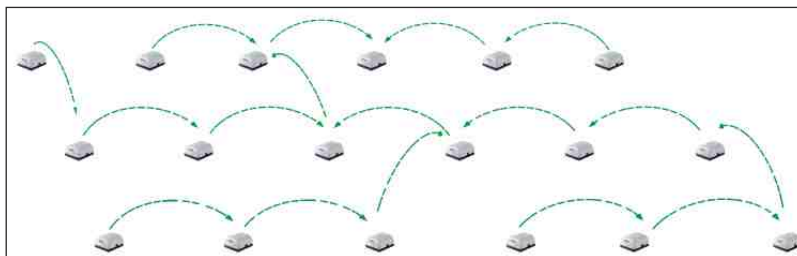
nodal acquisition and improving their decision-making processes.

How does Pathfinder elevate the ACCEL solution, and what key advantages does it offer to seismic acquisition operations?

Pathfinder is a core component of ACCEL solution, providing advanced wireless communication capabilities. Fully integrated into ACCEL, Pathfinder allows the operator to get real-time visibility into the status of the spread, even in challenging terrains. This seamless integration ensures that each ACCEL node is in operation in proper conditions and is deployed as expected, optimizing the overall efficiency and accuracy of the data acquisition process. It brings a high level of confidence in the data that will be acquired during the operation.

The major advantage here is that Pathfinder's real-time quality control (QC) suite is integrated in every node: the QC information is available without any human action, and without requiring any infrastructure or other equipment that would be heavy and costly to operate. This enables much faster and more reliable seismic surveys, especially in remote or difficult-to-access locations, which directly translates into reduced costs and quicker project timelines.

"The seamless integration of Pathfinder ensures that each ACCEL node is in operation in proper conditions and is deployed as expected, optimizing the overall efficiency and accuracy of the data acquisition process"



Sercel Accel Pathfinder

"Our advanced technologies are enabling not just energy exploration, but also real-time environmental monitoring to ensure safer and more sustainable marine operations"

For energy companies, this integration means faster, more accurate seismic data acquisition with fewer logistical challenges and reduced environmental impact. These are critical factors as the industry works toward more sustainable practices.

Considering Sercel's presence across APAC and ASEAN countries, how do you see the evolving landscape of seismic data acquisition in these regions, and what opportunities do you see emerging in the near future?

The APAC and ASEAN regions are very dynamic, with a growing demand for both conventional and renewable energy sources. As the energy sector in these regions expands, there is an increasing need for accurate and

products' key features are widely used to improve operation efficiency. We see a significant opportunity to support offshore oil and gas exploration as well, particularly in the South China Sea and offshore Southeast Asia. Additionally, as these regions invest heavily in renewable energy infrastructure, we expect the demand for seismic solutions for wind and geothermal energy to grow. With Sercel's robust presence in these markets, we are well-positioned to offer our expertise and technology to help ensure that these energy projects are carried out safely, sustainably, and efficiently.

With increasing demands for renewable energy, how does Sercel adapt its technology to support the transition to more sustainable energy sources, such

real-time seismic data to guide exploration and development. In land business, we are actively providing our latest technologies in India and neighboring countries, where our



TPS (Tuned Pulse Source): Sercel's low-frequency broadband marine seismic source



Marlin: Offshore logistics management solution

as wind and geothermal energy?

The transition to renewable energy is one of the most significant shifts we're seeing globally, especially in regions like APAC and ASEAN. At Sercel, we've been working on adapting our seismic technologies to meet the needs of these emerging sectors. For instance, in geothermal energy, we've adapted our systems to capture subsurface data for geothermal reservoir characterization, and have carried out numerous operations proving the benefits of our systems for geothermal application. We believe our expertise in high-resolution seismic data acquisition will continue to be instrumental in the development of renewable energy projects.

Maritime surveillance is becoming more crucial for environmental protection and safety. How is Sercel contributing to the monitoring of marine environments, and associated challenges?

Maritime surveillance is indeed a growing concern, particularly as we see increased industrial activity in the

oceans and a rising need to monitor marine ecosystems. At Sercel, we use our advanced technologies not just for energy exploration but also for environmental monitoring and ensuring safer and smarter offshore operations.

A key part of this effort is our Marlin solution. Whether close to shore or far at sea, Marlin is an all-in-one platform that offers an innovative suite of solutions for real-time vessel monitoring and alerts while streamlining offshore logistics and port management with precision and ease. As an operational hub, available in the cloud or on-premises, Marlin seamlessly integrates with existing systems to ensure unified and efficient workflows.

The challenges we face in this field include operating in difficult or remote environments, where conditions can be harsh, and data acquisition can be complicated. However, we've developed highly durable equipment and autonomous systems that can work efficiently in these tough conditions. We're also continuously improving our real-time data processing capabilities, which is essential for making quick, informed decisions to protect marine environments. dewjournal.com