

## Satellite Update November 2018

### Smart Ships and Satellites

*Technology already exists to operate ships autonomously, as has been demonstrated in coastal waters using mobile 'phone networks. When ships sail out of this coverage, satellite communications are vital.*

As ever, technological advances have left the regulatory landscape at the starting blocks. The issue with the comprehensive regulatory system currently offered by the International Maritime Organization (IMO) is that it does not move fast: the regulation of autonomous vessels has barely started. Issues that will need to be dealt with include:

- safe manning requirements (it is arguable that a vessel is sufficiently manned with no crew if so designed, although maritime conventions are not drafted on this basis);
- requirements of seaworthiness;
- compliance with navigation rules and collision avoidance regulations (COLREGS) which do however contain a human element;
- maritime liability regimes based on crew negligence;
- new software and hardware, including for navigation; and
- protection against cyber attacks.

The new HTS constellations will enable rapid advances in connected and autonomous systems allowing: remote navigation and maintenance; anti-collision alert systems; and better

communication between other ships and shore-side.

It is widely recognised that marine casualties and collisions are often caused by human error. Any automation of shipping systems could reduce human error and future crew numbers. This would reduce crew costs, help prevent crew injury and fatalities and reduce mental health issues from crew being at sea for extended periods of time.

More efficient remote operations can lower fuel use by better route planning; an advantage seen with connected ships that have navigation and engine management systems onboard.

It is now important for ship owners and the marine industry to take advantage of these technologies to make the shipping industry more efficient.

*Rachel specialises in commercial dispute resolution. She has experience in a variety of complex multi-jurisdiction claims including contractual and insurance disputes.*

*She advises on issues relating to the drafting, breach and termination of commercial contracts in the space, satellite and maritime sectors. She is also experienced in maritime related claims including: catastrophic injury and fatalities; accident investigations and collisions; yacht claims; and insurance coverage.*

*She has acted for ship owners in investigations and prosecutions arising from alleged criminal breaches of health and safety standards and for satellite manufacturers in investigations by the Health and Safety Executive.*



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