

# MEASUREMENT



# DID YOU KNOW

The time 'pips' broadcast every hour on Radio New Zealand National originate from the caesium-atomic clocks at IRL's Measurement Standards Laboratory (MSL), New Zealand's national metrology institute.

The caesium clocks at MSL maintain New Zealand's standard time to nanosecond (billionths of a second) accuracy. The international standard 'second' was defined in 1968 on the unchanging vibration of caesium atoms.

MSL computers linked to the caesium clocks service over three million time requests from New Zealand computers every day. The talking clock available via the Telecom NZ 0900 service is also operated by MSL, providing accurate time for calibrating time pieces.

**INDUSTRIAL RESEARCH  
LIMITED**  
*Te Taihu Pūtaiao*





## WHAT DOES THIS MEAN?

MSL's world-class services include a wide variety of calibration, specialist measurement and expert consultancy services and measurement R&D.

New Zealand's access to global markets is reliant on foreign governments recognising the accuracy

of our system of weights and measures. Without such a system New Zealand could risk losing millions of export dollars through non-tariff trade barriers.

MSL plays a crucial role in this by providing International System of Units (SI) measurement standards.

Through regular comparisons with other laboratories, measurements and products made in New Zealand are accepted around the world.

