1) Wavetrend markets its products for industrial and commercial usage . Wavetrend's products are not aimed at the residential market.
2) We have just achieved IECEx and ATEX ratings for Europe and will be aiming to achieve MSHA for the USA. Wavetrend's key vertical markets are oil and gas platforms, mining and heavy industrial applications. In these verticals the tags are split between people and assets both fixed and mobile. Typically these are workers, miners, oil operatives and other personnel in secure and or high risk areas. The assets can be any type of plant equipment or vehicles.
3) Wavetrend is a B to B supplier. Wavetrend does not sell directly to end customers. The biggest deployments in the mining sectors are currently in Chile and Australia.

Wavetrend Active Duo tags have a sensitivity setting in them of 0-10 which governs a 'Leaky Bucket 'algorithm within the tag.

The way in which the algorithm works as follows; the Tag processor interrogates the tag every 100ms to detect if the MS sensor is active. If it is active it adds Two counts into the bucket, 100ms later if the tag is still moving it adds another Two counts, this continues until the preset threshold is reached. The leak in the bucket is the sensitivity setting, depending on its value counts are removed from the bucket each time the MS sensor is inactive.

Once in alarm the tag will transmit a group of 4 alarm beacons, the duration of each beacon is 7ms and they spaced 1.5 seconds apart. The greatest sensitivity of the tag is 10 and the least is 0.

The default movement setting is 8. At this setting a tag would have to be exhibiting considerable movement to go into alarm. If a tag is worn by a person they would need to be moving about to go into alarm, sitting at a desk would not make the tag alarm.

The sensitivity value of the tag is factory set and can only be changed using a Wavetrend Tag programmer. These programmers are not field deployable and only exist with a few of Wavetrend's distributors outside of the company. The end customer cannot change the sensitivity settings.

However if it would aid compliance these settings can be factory locked to prevent any changes on the sensitivity settings.

Another use for the tags in Europe is for the security of assets in museums. These tags beacon every 30 seconds in the event that a picture is lifted from the wall or a display case broken will they go into alarm. Ensuring that the tags do not alarm by accident is our biggest challenge. In these deployments the tag is in a NON alarm state for 99.99% of its life.

To put a tag into continuous transmit the user would have to be continually and purposely shaking the tag. The same continuous transmission argument can be

made where a key fob in a garage door system is pressed continually. It is an unlikely event and only one that can be orchestrated however it is perfectly possible.

If it aids compliance Wavetrend can add precise usage and guidance instructions within the tag manual to avoid any scenario which would cause the tags transmit in alarm in a non alarm condition.

Wavetrend provides a tag life/battery warranty. In the event that the tag was in continuous transmission the tags would not last the warranty period and we would have to replace them.

In the last 2 years Wavetrend has replaced 1% of the total tags supplied for battery death under warranty. This number also includes manufacturing defects that reduce battery life. On this basis at least 99% of tags supplied by Wavetrend are being used correctly and are not in continuous motion.

It is certainly not in our interests or the interests of our customers for the tags to be in continuous transmission. We believe that by using the timing algorithm we allow tags to transmit their data at a faster rep rate only at the times when that is required for urgent action within the system and at which the 10 second delay would make the difference between success or failure or life and death.