Benefits

The systems that were worked on can be applied in a variety of parts, industrially or in manufacturing, the use of commercial aircrafts, in its building would save a great number of costs because of the copper, since implemented in a massive way and with more investigation would achieve that even more systems can be modified. It would also apply in the automotive industry, because if it is possible to apply it on an aircraft it can also be applied on a car, bus, or motorcycle: where the lower weight. Will make it to consume less fuel, generating a big saving without mentioning that the piezoelectrics will keep using, because in these systems are presented a big number of vibrations.

For the airlines, this implies a lot of advantages because one of the most difficult things in maintenance is the wiring part, since they are a lot and accessing to them makes its service complicated, without mentioning that a defective cable needs to be located inside a great number of cables, even though there is a specific color for each system and there is also computers that help you locating the failure, the method that is thought to be implemented is more effective, because it would not only prove if the receptor or transmitter are good and for the piezoelectrics, these must be substituted for new ones, but since they are so cheap, it would no be a problem. All this is related with the usage of predictive maintenance, which make it easier.

Creating a project to applicate it in the present but also focusing in the future was the principal objective, its applications in the aeronautical field, specifically in the Boeing 737-800, therefore it is planned that this can be applied in the future in every single aircraft.

For the aerospace industry or space exploration the reduce of wires is so important because instead of the space used for the wire systems, a new security system or space for a useful cargo can be implemented. Also in the space being an isolated environment the interferences will be null, it will only need to make sure that the data transmission in the vehicle won’t be bothered.
Another advantage is the less contaminants emissions, this because to produce a copper kg you need to emit 6kg of C02 which translate as greenhouse effect. Also this idea can be implemented in an others electrical components such as stove, computers, washing machine, etc, reducing significantly the use of copper.