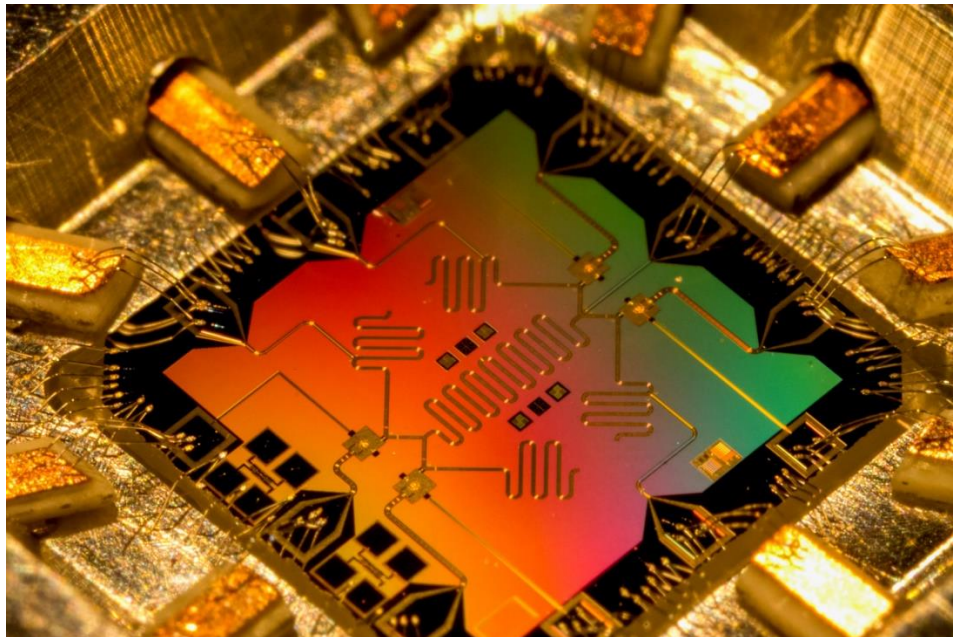


CEO Note: **The Shared Challenges in RFID and Quantum Computers**

A Series of Messages from our CEO... Jo Major

If you think that it is cool to send corrupt data to customers – please stop, this note isn't for you. What is common to communication, quantum computers and RFID? → **Errors!**

- Errors exist in all complex systems
- CD, DVD, internet, memory, quantum computers all fix them!
- RFID has no capability to correct errors



Scientific American (May 2022): Zaira Nazario, a quantum theorist at the IBM Watson Research Center in Yorktown Heights, N.Y. stated:

*"It is a law of physics that everything that is not prohibited is mandatory. Errors are thus unavoidable. They are everywhere: in language, cooking, communication, image processing and, of course, computation. **Mitigating and correcting them keeps society running.** You can scratch a DVD yet still play it. QR codes can be blurred or torn yet are still readable. Images from space probes can travel hundreds of millions of miles yet still look crisp. Error correction is one of the most*

*fundamental concepts in information technology. **Errors may be inevitable, but they are also fixable.***



What about RFID?

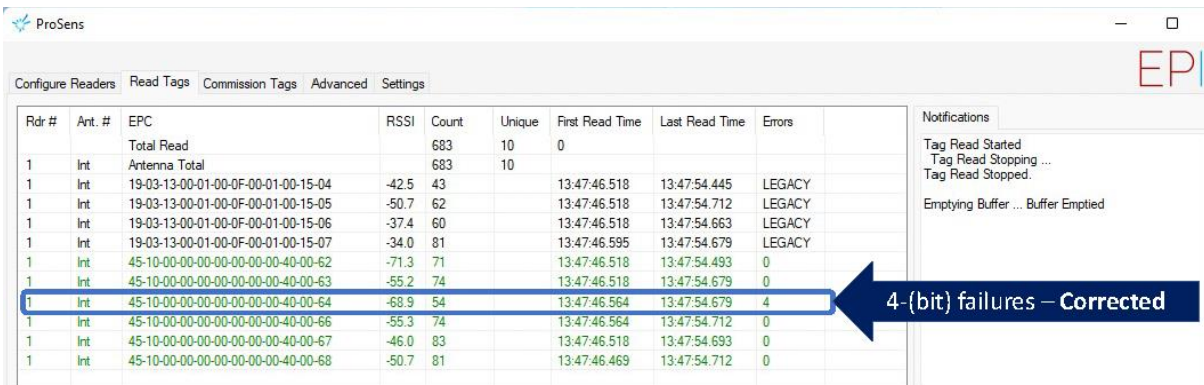
- No memory error detection or correction
- Transmission error detection only
- When errors occur, nobody knows

Best Practices: Error detection and management

- Quantum computers had bit flips and phase errors
 - Solved in 1995 for Quantum Computers
- RFID needed an autonomous Error Correcting Solution
 - SensThys "EPIC" (Intelligence inside of the EPC)

What is EPIC?

- Solves memory and transmission errors
- Important for critical data applications
- Fully backward compatible
- Native to SensThys readers
- Can support other readers



ProSens

Configure Readers | Read Tags | Commission Tags | Advanced | Settings

Rdr #	Ant. #	EPC	RSSI	Count	Unique	First Read Time	Last Read Time	Errors	
Total Read				683	10	0			
1	Int	Antenna Total		683	10				
1	Int	19-03-13-00-01-00-0F-00-01-00-15-04	-42.5	43		13:47:46.518	13:47:54.445	LEGACY	
1	Int	19-03-13-00-01-00-0F-00-01-00-15-05	-50.7	62		13:47:46.518	13:47:54.712	LEGACY	
1	Int	19-03-13-00-01-00-0F-00-01-00-15-06	-37.4	60		13:47:46.518	13:47:54.663	LEGACY	
1	Int	19-03-13-00-01-00-0F-00-01-00-15-07	-34.0	81		13:47:46.595	13:47:54.679	LEGACY	
1	Int	45-10-00-00-00-00-00-00-40-00-62	-71.3	71		13:47:46.518	13:47:54.493	0	
1	Int	45-10-00-00-00-00-00-00-40-00-63	-55.2	74		13:47:46.518	13:47:54.679	0	
1	Int	45-10-00-00-00-00-00-00-40-00-64	-68.9	54		13:47:46.564	13:47:54.679	4	4-(bit) failures – Corrected
1	Int	45-10-00-00-00-00-00-00-40-00-66	-55.3	74		13:47:46.564	13:47:54.712	0	
1	Int	45-10-00-00-00-00-00-00-40-00-67	-46.0	83		13:47:46.518	13:47:54.693	0	
1	Int	45-10-00-00-00-00-00-00-40-00-68	-50.7	81		13:47:46.469	13:47:54.712	0	

Notifications

- Tag Read Started
- Tag Read Stopping ...
- Tag Read Stopped.
- Emptying Buffer ... Buffer Emptied

Interested in learning more about technology that eliminates erroneous data in RFID?

Click here