

# A REVOLUTIONARY BREAKTHROUGH IN MEMORY TECHNOLOGY



# SAFE HARBOR

During the course of this presentation, Micron and Intel may make projections or other forward-looking statements. Forward looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Many factors could cause actual results to differ materially from the forward-looking statements in this document.

We wish to caution you that such statements are predictions and that actual events or results may differ materially. We refer you to the documents both companies file on a consolidated basis from time to time with the Securities and Exchange Commission, specifically each companies' most recent Form 10-K, or, if made available, their Form 10-Q. For Micron, please also see <http://investors.micron.com/riskFactors.cfm>.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. We are under no duty to update any of the forward-looking statements after the date of the presentation to conform these statements to actual results.





---

**Rob Crooke**  
*Senior Vice President,  
Intel*



---

**Mark Durcan**  
*CEO,  
Micron*

A 3D rendering of a storage structure, likely representing 3D XPoint technology. It features a grid of vertical pillars. The pillars are colored in shades of blue, green, and yellow. The top of each pillar is a flat, light blue surface. The background is a dark blue gradient.

**INTEL AND MICRON BRING  
A NEW CLASS OF STORAGE AND MEMORY**

---

**3D XPOINT™**

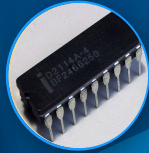
# A TIMELINE OF MEMORY CLASS INTRODUCTIONS



**1947**  
Ram



**1956**  
PROM



**1961**  
SRAM



**1966**  
DRAM



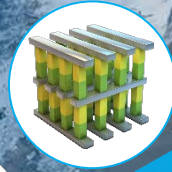
**1971**  
EPROM



**1984**  
NOR Flash  
Memory



**1989**  
NAND Flash  
Memory



**2015**  
3D XPoint™

**IT'S BEEN DECADES SINCE THE LAST  
MAINSTREAM MEMORY**

# THE EXPLOSION OF MODERN DATA

*REQUIRES*

## A REVOLUTIONARY NEW TECHNOLOGY

**CAPACITY**



**PERFORMANCE**

**NON-VOLATILE**

# THE BREAKTHROUGH

## A NEW CLASS OF NON-VOLATILE MEMORY



**1000X**  
**FASTER**  
THAN NAND



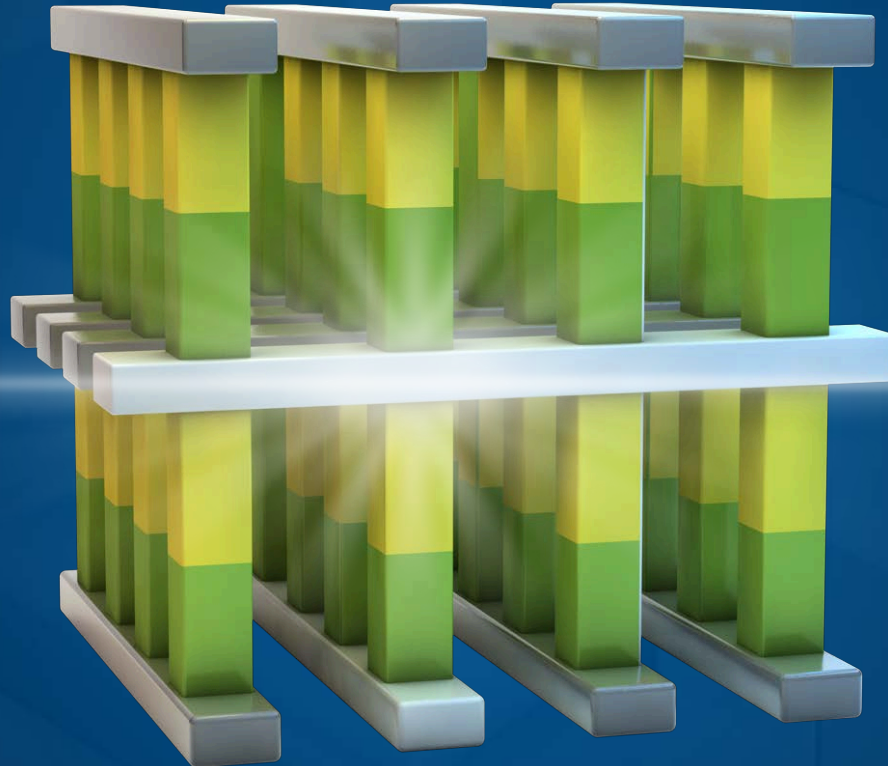
**1000X**  
**ENDURANCE**  
OF NAND



**10X**  
**DENSER**  
THAN CONVENTIONAL  
MEMORY

\*Results have been estimated or simulated using internal analysis or architecture simulation or modeling, and provided to you for informational purposes. Any differences in your system hardware, software or configuration may affect your actual performance

# WHAT IS 3D XPOINT™?



## Crosspoint Structure

Selectors allow dense packing and individual access to bits



## Scalable

Memory layers can be stacked in a 3D manner

## Breakthrough Material Advances

Compatible switch and memory cell materials



## High Performance

Cell and array architecture that can switch states 1000x faster than NAND



# 3D XPOINT™ ENABLES FUTURE APPLICATIONS

## END USER POSSIBILITIES



Massive  
in-memory  
data base



Fast system  
recovery



Low latency



High endurance



Gaming



High fidelity  
pattern  
recognition



Genomics

## AMAZING NEW EXPERIENCES



**3D XPOINT™ EXISTS**

**AND IS TRULY A BREAKTHROUGH  
IN MEMORY TECHNOLOGY**

# A REVOLUTIONARY BREAKTHROUGH IN MEMORY TECHNOLOGY

