Ireland: Stories from the Silicon Island

Operating & Building Europe's most advanced Fabs

E. Murphy
Senior Director, Corporate Services and Facilities
Intel Ireland, Leixlip, Ireland

Abstract
Intel employs c.5,000 people in Ireland. Intel's site in Leixlip Kildare houses a 30 billion investment including its recent 17 billion expansion, Fab 34, incorporating the latest EUV technology. Fab 24 in Leixlip provides foundry services. As a result of this and other investments Ireland has one of the most advanced fab construction and engineering capabilities in Europe. Enda Murphy will discuss Intel's operations in Ireland and Richie Casey Ireland's significant fab construction and engineering capabilities.

Biography
Enda graduated from the Uuniversity of Limerick with a degree in applied physics and achieved an MBA at Dublin City Uuniversity in 2009. He joined Intel Ireland in 1996 and spent over a decade supporting the yield engineering team. He moved into facilities management in 2011, managing the industrial waste systems and in subsequent years was managed the mechanical and operational teams before being appointed as site director for facilities in 2023.

References

Operating & Building Europe's most advanced Fabs

R. Casey
Global Program Development Director
Arcadis, Dublin, Ireland

Abstract
Intel employs c.5,000 people in Ireland. Intel's site in Leixlip Kildare houses a 30 billion investment including its recent 17 billion expansion, Fab 34, incorporating the latest EUV technology. Fab 24 in Leixlip provides foundry services. As a result of this and other investments Ireland has one of the most advanced fab construction and engineering capabilities in Europe. Enda Murphy will discuss Intel's operations in Ireland and Richie Casey Ireland's significant fab construction and engineering capabilities.

Biography
A dedicated professional specializing in the organizational development of large-scale mega projects, with over 30 years of international experience in high-volume manufacturing and construction management within the semiconductor industry.
Core focus areas include project programming, initial startups, and project recovery. As an author of numerous articles on project delays and mitigation strategies, he has personally delivered hundreds of hours of program establishment processes to global clients, helping them enhance operational and resource-driven strategies to achieve project objectives.
He has had a distinguished global career with a strong track record in project organizational design, cost reduction, productivity improvement, quality control, process optimization, and people development.

References

Advanced Packaging Where to Next

P. O'Brien
Head of the Photonics Packaging & Systems Integration Group
Tyndall National Institute, Cork, Ireland

Abstract
The talk will present the latest developments in photonic and electronic packaging technologies, and how these technologies can transition from research to pilot-scale manufacturing. We will review the use of new packaging materials and processes, and discuss how these processes can be scaled to mass production. The talk will also highlight important research initiatives in advanced packaging, particularly the recently launched European Pilot Lines, as well as Ireland's growing role in advanced packaging research and manufacturing.

Biography
Prof. Peter O'Brien is Head of the Photonics Packaging & Systems Integration Group at the Tyndall Institute, University College Cork, Ireland. He is also Director of the European Photonics Pilot Line (PIXAPP), Leader of Advanced Packaging in the new EU Chips Act Photonics Pilot Line (PIXEurope), and Director of the European Photonics Academy. His group is involved in multiple national, European, and U.S. National Science Foundation (NSF) and DARPA projects, as well as numerous direct industry collaborations. The group specializes in the development and scaling of photonic and electronic packaging technologies—from fundamental simulation and design to prototype development and the transition to pilot-scale production. They apply their expertise to a wide range of applications, including high-speed communications, artificial intelligence, augmented reality, quantum technologies, medical diagnostics, and sensing. Prof. O'Brien previously founded and was CEO of a start-up company manufacturing specialty photonic systems for biomedical applications, which he sold in 2009. He was a postdoctoral researcher at the California Institute of Technology and a research scientist at NASA’s Jet Propulsion Laboratory, where he developed submillimetre-wave devices for remote sensing applications. He received his degree and PhD in Physics from Trinity College Dublin and University College Cork, respectively.

References

P. Smyth
Chief Executive Officer
X-Celeprint, Cork, Ireland

Biography
Peter Smyth is CEO of X-Celeprint, the global leader in heterogenous integration using micro-transfer print (MTP). Peter is a technology executive and entrepreneur with over thirty years’ experience in semiconductor deep technology and licensing. He was founder of RedMere Technologies (fabless semiconductor startup) and was a senior executive of semiconductor device and systems intellectual property firm Ceva Inc. (NASDAQ, previously Parthus). Peter has grown businesses across Europe, the US and Asia and leads the X-Celeprint team from his base in Ireland. Peter is an Electronic Engineering graduate of Dublin City University.

References

'Starting & Scaling Deep Tech R&D' Panel Discussion

B. Farley
Corporate Vice President of Communications Engineering
AMD, Dublin, Ireland

Abstract
Ireland has a long history of attracting and scaling semiconductor R&D and design activities. Whither a large multinational like AMD or a growing European deep tech SME like Mbryonics scaling R&D and design activities pose unique and also common challenges to both sets of companies. Brendan Farley will discuss AMD's growth and development in Ireland and Cormac O'Sullivan the intricacies of starting and scaling an SME in Ireland. Peter Smyth CEO of another Irish start up, will moderate the discussion.

Biography
Brendan Farley is Corporate Vice President of Communications Engineering at AMD. Brendan is also Managing Director of the Irish operations where AMD operates an advanced research, development, engineering, and IT centre.
Brendan is responsible for a global, multi-disciplined R&D team developing key technologies for 6G wireless networks and advanced wired communications infrastructure.
Before joining AMD / Xilinx 15 years ago Brendan worked in various senior roles in the microelectronics sector and is a regular contributor at conferences and industry forums.

References

'Starting & Scaling Deep Tech R&D' Panel Discussion

C. O'Sullivan
Senior Director of Electronics
Mbryonics, Cork, Ireland

Abstract
Ireland has a long history of attracting and scaling semiconductor R&D and design activities. Whither a large multinational like AMD or a growing European deep tech SME like Mbryonics scaling R&D and design activities pose unique and also common challenges to both sets of companies. Brendan Farley will discuss AMD's growth and development in Ireland and Cormac O'Sullivan the intricacies of starting and scaling an SME in Ireland. Peter Smyth CEO of another Irish start up, will moderate the discussion.

Biography
Cormac is Senior Director of Electronics at MBRYONICS where he's helping to build the Internet in Space.

He is a Technology Leader with 25 years Satellite and Semiconductors industry experience.He has a track record of leading teams that designed and delivered custom integrated circuits to Satellite Operators such as Iridium, Inmarsat/Viasat, Orbcomm, AST-Spacemobile and others.
Expert in communication circuit & system design and architecture with a whole product view.
Experienced in building company technology strategy and roadmaps, understanding industry trends and creating product offerings that solve high value customer problems.
Proven success in effecting organizational change and seeding and sponsoring internal R&D activities.
Cormac founded and grew an Irish subsidiary for a Californian NASDAQ company as its Integrated Circuit R&D office that successfully developed mmWave System on Chips. He holds multiple Patents and has many Industry publications. Cormac's alma mater is University College Cork and he's originally from Kerry, Ireland.

References

Thank You, Closing & Wrap Up

A.-M. Tierney Le Roux
Senior Vice President Global Enterprise Technology
IDA Ireland, Dublin, Ireland

Abstract
IDA Ireland is Ireland's inward investment and development agency. IDA Ireland works with over 1,800 clients and today Ireland is a recognised Technology hub with over 179,000 people in Ireland employed in ICT related activities. IDA Ireland has a dedicated semiconductor unit that works with semiconductor companies across the value chain looking to establish operations in Ireland.

Biography
Anne-Marie has 23 years' experience in the global investment environment with IDA Ireland, working across a number of key roles in Ireland and abroad, with a specific interest in enterprise technology, semiconductors and cyber.

Anne-Marie took up her current position as Senior VP, Enterprise Technology in October 2021, and works with existing Technology companies to expand their mandates and operations in Ireland and is also responsible for attracting new Technology corporates to establish in Ireland. Prior to this role, she held positions as Department Manager, Regional Development, Director of Europe, based in Paris and Project Manager in the Technology Division. Prior to IDA Ireland, Anne-Marie worked in the Management Consultancy business of PricewaterhouseCoopers in London in the retail and CPG global industry sectors.

Anne-Marie is a Law graduate and holds an MSc in International Marketing, as well as being an Associate Practitioner of the European Chartered Institute of Marketing. Anne-Marie is a Board member of CeADAR, Ireland's National Centre for Applied AI and a Board Member of Cyber Ireland. Anne-Marie engages with key stakeholders on IDA Ireland's STEM agenda, is a mentor with the Open Doors Initiative & at the IMI 30% Plus Program

References

Thank You, Closing & Wrap Up

S. Carroll
Vice President. IDA Ireland Semiconductor Unit
IDA Ireland, Dublin, Ireland

Abstract
IDA Ireland is Ireland's inward investment and development agency. IDA Ireland works with over 1,800 clients and today Ireland is a recognised Technology hub with over 179,000 people in Ireland employed in ICT related activities. IDA Ireland has a dedicated semiconductor unit that works with semiconductor companies across the value chain looking to establish operations in Ireland.

Biography
Seamus Carroll leads IDA Ireland's semiconductor unit which was recently established in response to developments in the industry such as the European Chips Act.

IDA Ireland is the investment promotion agency that assists multinational companies set up, expand and develop operations in Ireland. In his role Seamus is responsible for positioning Ireland to capture more global investment across the semiconductor value chain.

Seamus also represents IDA on the committees of Ireland's microelectronics industry association (MIDAS) and the microelectronics circuits centre of Ireland (MCCI). He is also involved in co-ordinating IDA's inputs in relation to Ireland's National Semiconductor Strategy, Silicon Island.

Seamus joined IDA in 1997 and since that time has worked in a number of industry sectors straddling manufacturing and services activities including; enterprise technology, medical technology, biopharmaceuticals and emerging companies. Previous to his current role in IDA Headquarters Dublin, Seamus was based at IDA's New York office.

References