

## **/i<sup>2</sup> Technology**

/i Technology is a metadata protocol that allows film and digital cameras to seamlessly record key lens data for every frame shot via electronics inside each /i equipped lens: focal length, focus distance, zoom position, near and far focus, hyper focal distance, T-stop, horizontal field of view, entrance pupil position, inertial tracking and shading. The lens data and inertial data (position and orientation data) will help VFX teams to better deal with common issues like occlusions, fast camera motion (motion blur) and other challenges associated with fast-paced camera movements typical of today's shooting style. All of this is output by /i<sup>2</sup> enabled lenses. The /i<sup>3</sup> ("i cubed") enabled lenses will include all that /i<sup>2</sup> offers as well as distortion data. It will be rolled out across all Cooke spherical lens models starting mid-September 2018. Data may be selected to record in either metric or imperial units and is synced to time code within the camera.

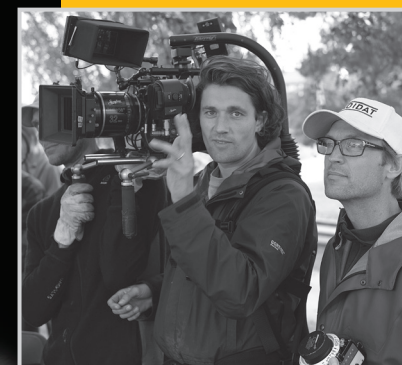
**/i Technology is an evolving industry standard, to ensure metadata compatibility downstream from acquisition through post production giving a better looking product in a shorter amount of time.**

## **Current /i<sup>2</sup> Technology Partners**

/i Technology has received wide support in the industry from companies who are adopting /i Technology within their own hardware and software products. The growing list includes:

Aaton	Mark Roberts
AJA Video Systems	Motion Control
Ambient Recording GmbH	Mo-Sys
Angenieux	OptiTek
Arri	Ovide
AstroDesign	P+S Technik
Atomos	Panasonic
AVID	Panavision
Birger Engineering	Pomfort
Blackmagic Design	Preston Cinema Systems
Canon	Quantic
Chrosziel	RED
Cinematography Electronics	RE:Vision Effects
CMotion	Sato
Codex	Service Vision
Cooke Optics Ltd.	Sigma
Fujinon	Sony
Global Boom International Ltd.	The Foundry
IB/E optics GmbH	The Pixel Farm
JVC	Teradek
Leitz Cine Wetzlar	Tokina
Lexhag Limited	Transvideo
Lonely Films	Vision Research
Luxio	Vitec
	Zeiss

**Companies interested in becoming an /i Technology Partner by incorporating /i protocol into their products, contact us at [iTech@cookeoptics.com](mailto:iTech@cookeoptics.com).**



Johan-Fredrik Bødtker with camera and AC Jens Patterson

"The metadata really helped me get the shots. I felt more in control and could always watch my T-stop and focus range in the viewfinder without having to stop shooting to remove my eye from the eyepiece. And, the AC doesn't have to mumble 'close range' all the time because he knows I actually know the limits."

– Johan-Fredrik Bødtker, Cinematographer, *Valkyrien*, TV Series

### **Why do I need /i<sup>2</sup> Technology?**

Whatever your final product – feature, TV series, documentary, commercial, music video – the use of /i metadata will simplify your production processes and make the VFX process faster and more accurate during post production.

Technology by



**/i<sup>2</sup> Technology**

“This technology represents the essence of forward compatible, forward thinking metadata support. Anyone can use it, high degree of accuracy. Ten stars out of a possible five for providing for the digital future of cinematography. Bravo!”

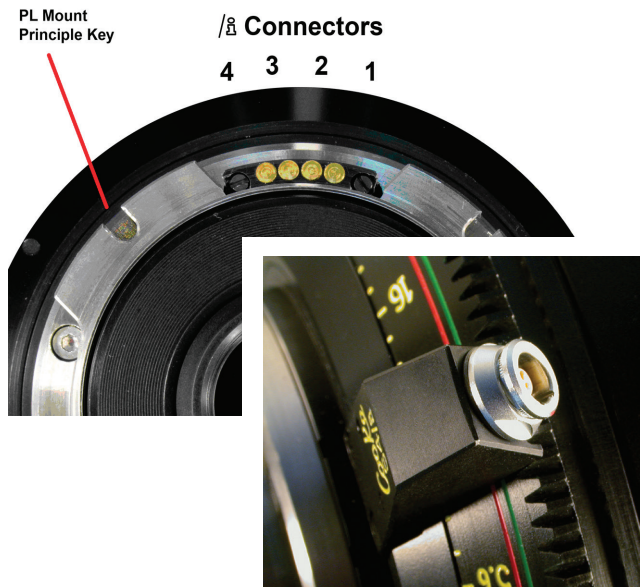
– David Stump, ASC, DP/VFX Supervisor

“The DP can do VFX shots without always having a VFX supervisor on set. It’s a huge timesaver for compositing when the artists don’t have to guess all the values since the DoF and focal length values are read by Nuke directly. It can save a whole day’s work on some shots.”

– Andreas Herzog Grimsø, Storyline, production and post production services.



Use  $/i^3$  data for virtual graphic placement and so much more



## How does it work?

Electronics inside each  $/i$  lens mount connect and communicate directly with virtually all the popular PL mounted cameras (supported  $/i$  Technology features vary per camera). Or, you can record to third party accessories, like Ambient Lockit or Transvideo Rainbow monitors, via the external lens port that syncs to motion files via the camera’s timecode. Do lens correction in real time with Livegrade Pro.

## NEW $/i^3$ Technology

NEW  $/i^3$  (“i cubed”) provides distortion mapping for faster and more cost-effective post production processes. This is not just a theoretical measurement of all lenses of a particular focal length but is specific to the lens being used, which is important for applications like 3D camera tracking and 3D modelling.

**VFX artists will save hours of time when they have to composite a creature into that 16.4mm to 32.7mm eight second zoom, during a follow focus from 65 to 12 feet at T2.8 1/3. With the  $/i$  metadata automatically recording every move, you just saved the guesswork in Match Moving and mountains of paperwork in post.**

Virtual graphic placement teams can match  $/i$  data with their algorithms for better image quality and positioning accuracy, saving time and budget for live broadcast applications like virtual show enhancements, product placement, enhanced graphics, statistical graphics and other dynamic virtual show elements.

“The use of this data provides more accurate results in faster time and removes yet another element of uncertainty from the set-to-post information transfer process. Its use will allow more complex shots to be completed and will also allow new types of shots.”

– Michael Lancaster, Product Director, The Pixel Farm