INTEGRATED SYSTEMS ENGINEERING S.R.L.
MILAN – ITALY

SEL1L

TISSUE & CELL BIOTECNOLOGIES

ISENET-USA LLC

CIC PHILADELPHIA
PHILADELPHIA, PA - USA

cores/hour

Galileo TMAtic 5000
Fully Automated Tissue Arrayer

www.Isenet.it

video: https://youtu.be/ePd71JhrZPc

Why Choose Galileo TMAtic

- **HTS Next Generation Fully Automated** Tissue Microarrayer Platform.
- Proprietary **Galileo TMAtic user interface** (based on Galileo TMA CK series platforms)
- **Open architecture** which allows to work with different types of tissue cassettes (Standard, Macro and 96/384 tube microplate in any combination) for molecular analysis.
- **Precise core selection** with automatic Digital 3 points glass slide overlay
- **Cores insertion depth control** (via software)
- **Digital report:** open office (Excel compatible) and **XML** to interface with commercial Digital Scanners (Aperio, Hamamatsu).
- **Remote SW**, to create the TMA geometry and design in the Pathology Office.
- **Service and post-sales support world-wide**.

HTS 120-130 cores/hour

Needle cleaning at each cycle

Needle integrity check at each cycle

Exclusive Technical Features

Tissue Block Bar-code reading

Measurement of Tissue Blocks height

Control of extraction of tissue cylinder

INTEGRATED SYSTEMS ENGINEERING S.R.L.
MILAN – ITALY

SEL1L

TISSUE & CELL BIOTECNOLOGIES

ISENET-USA LLC

CIC PHILADELPHIA
PHILADELPHIA, PA - USA
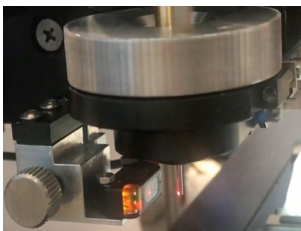
Exclusive Features:

- **Able to use different types of Tissue Cassettes in any combination: Standard and Macro; 96/384 vials cassettes for further molecular analysis.**

- **Needle integrity check at each cycle.**
- **If needle is broken or bent Galileo TMAtic will stop, allowing the operator to change the needle and restart the automatic punching cycle.**

- **Tissue Block height measurement. (5 measurements per block).**
- **Minimum paraffin height accepted is 2 mm.**
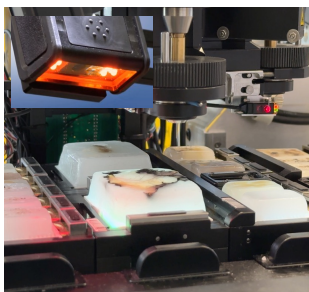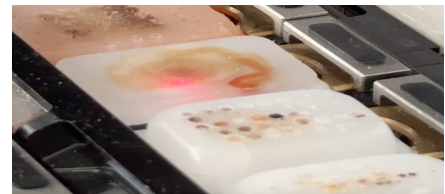
- **Bar-code reading of table configuration and tissue blocks (displayed on the screen during the construction process).**
- **Checks if tissue block mounted is part of the design file.**
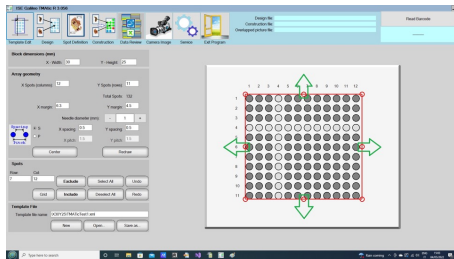
- **Automatic punching cycle (120-130 cores/hour) with needle cleaning at every cycle.**

- **Control sensor if tissue core is inside of the punch needles. This assures that all cores are extracted.**
- **In case of missing cores, they can be recovered, manually, at the end of the automatic punching cycle.**

INTEGRATED SYSTEMS ENGINEERING S.R.L.
MILAN – ITALY

SEL1L

TISSUE & CELL BIOTECNOLOGIES

ISENET-USA LLC

CIC PHILADELPHIA
PHILADELPHIA, PA - USA

TMA workflow

TEMPLATE EDIT

Easy preparation of the TMA geometry: definition of TMA block size; selection of needle size and space between cores; stretch function by mouse operation to increase the number of rows and columns.; possibility to exclude rows and columns; save templates geometries for future use.
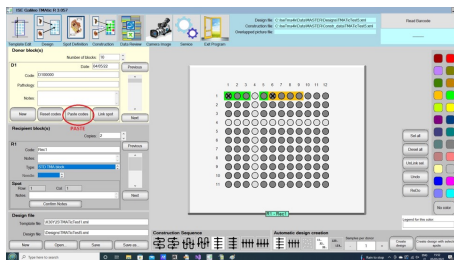
DESIGN

Selection of tissue core position on the TMA block (recipient): possibility to import the Excel File with all Bar-codes and annotation for each donor block as part of the design; manual or automatic position of the cores with possibility of sequential or random positioning; use of different colours to identify different types of tissue.
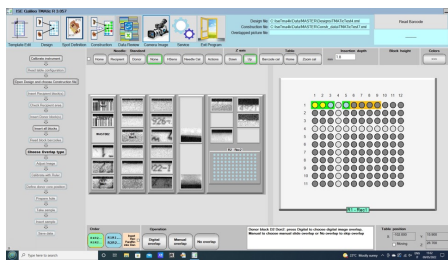

CONSTRUCTION

Table configuration and tissue block position check (displayed on the screen). Bar-code readings and check if tissue blocks mounted are part of the design file.

Import of High-Definition glass slide image; manual selection of the "area of interest" (with Aperio ScanScope); save into the image folder the "screen shot image" of the marked glass slide.

Precise core selection by choosing:

• **"digital glass slide image overlay"** (select from the "image folder" the marked slide which will be overlayed automatically using the 3P matching function.

• **No Overlay**, select core position directly on tissue block image,

If not satisfied, it is possible to use the stretch, Oops or Redo function.

At the end of core selection, start the "Automatic Coring Process".
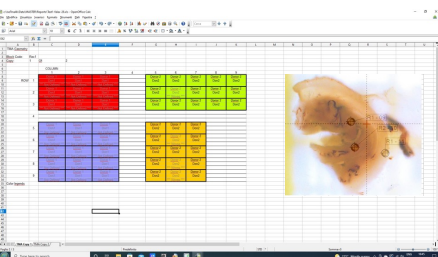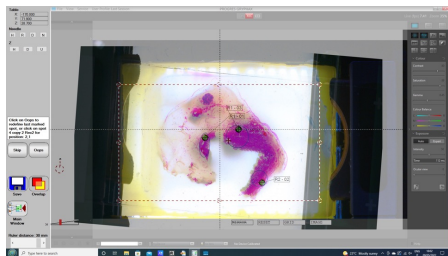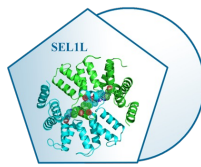

DIGITAL REPORT (DATA REVIEW)

• Create the final report in Open Office format (Excel compatible) or XML file (to interface with commercial digital scanners)

• The Excel file contains: Bar-code number and image of the tissue cassette (if Bar-codes are not used); annotation (if included); image of the glass slide with the indication of where the cores where extracted.

REMOTE SOFTWARE

Allows multiple user groups to work simultaneously from their PC to define the TEMPLATE and DESIGN. increasing productivity.

INTEGRATED
SYSTEMS
ENGINEERING S.R.L.
MILAN – ITALY

SEL1L

TISSUE & CELL BIOTECNOLOGIES

ISENET-USA LLC

CIC PHILADELPHIA
PHILADELPHIA, PA - USA

Technical Specifications:

Galileo TMAtic 5000
Fully Automated Tissue Arrayer

www.Isenet.it
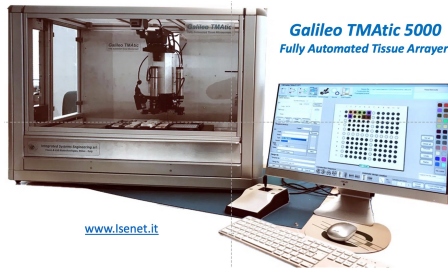
- HP Pavilion 24-K 0035NL All-in-One Computer with Windows 10 Operating System or equivalent
- Standard configuration: **35 Std Blocks + 1 cleaning/waste Bin**
- Motorized stage Märzhäuser (SCAN 380x170mm-4 mm) – Speed: 30 mm/sec.
- Controller Märzhäuser TANGO 3 DT 24Vdc & Joystick.
- Cmos Jenoptik Griphax Arktur 2/3 " (8 Mpixel) Camera
- Optics Kowa f 50mm objective autofocus
- Embedded 1D/2D Bar-code reader
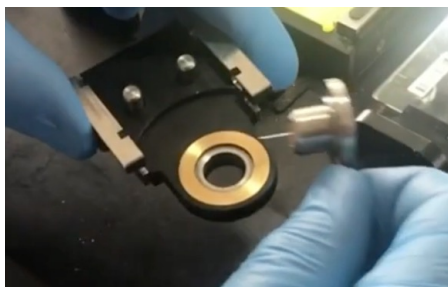
- Easy mounting and quick punching needles replacement
- Wide range of punching needles available. (0.6, 1.0, 1.5, 2.0 mm/diam.

TMA cores per Tissue size / punch needles size

Needle size	Standard Cassette (28x42 mm)	Row & Column	Macro Casette (52x72 mm)	Row & Column
* 0.6 mm/Dia.	640 cores max.	20x32	1.672 cores max.	38x44
* 1.0 mm/Dia.	300 cores max.	15x20	780 cores max.	26x30
* 1.5 mm/Dia.	140 cores max.	10x40	378 cores max.	18x21
* 2.0 mm/Dia.	80 cores max.	8x10	168 cores max.	12x4

CONSUMABLES

PUNCHING NEEDLES SET

0. 6	1.0	1.5	2.0 (mm/diam.)

ACCESSORIES

6 Standard Blocks Holder	3 Standard Blocks + 1 Macro Block Holder	6 Standard Blocks + 1Microplate Holder

2 Macro Blocks Holder	**Waste-Cleaning Bin**	