

BRAINER

PHYSIOTHERAPY FOR THE MIND

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AAACL

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About Us

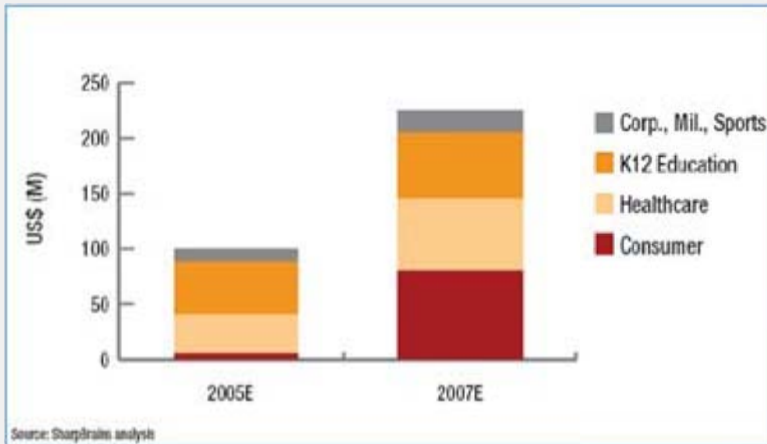


Activity: Brainer promotes the use of technologies and systems for recovering, maintaining and improving cognitive-cerebral and communication functionalities.

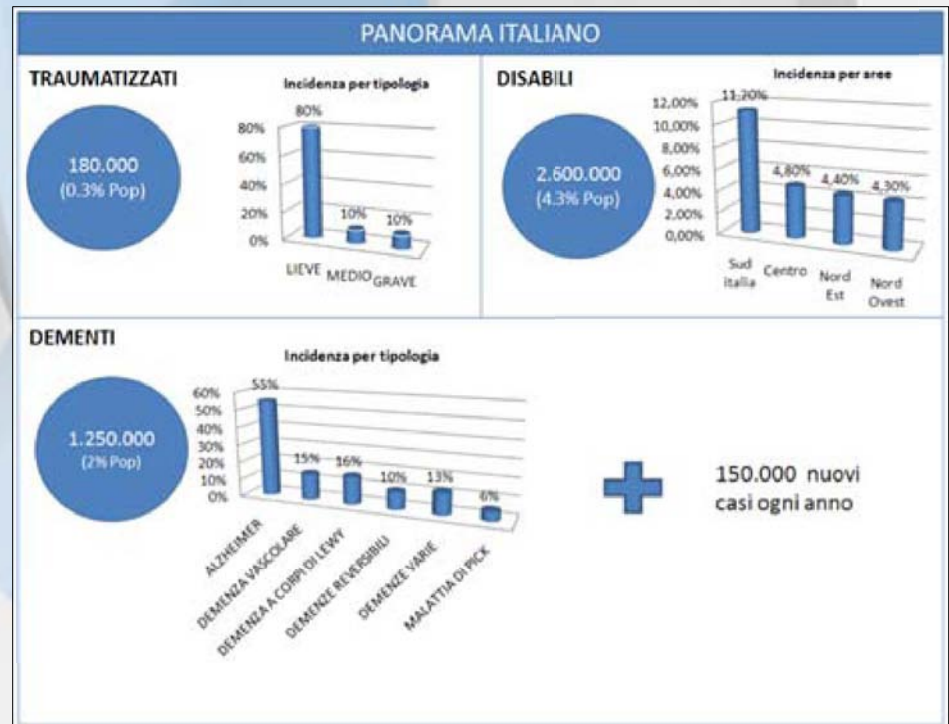
→ Founded at the end of 2006 by Giancarlo Bertoldi, neurologist and anesthetist from Turin, it develops:

- ✓ Software applications containing exercises aimed at **preventing cerebral aging** and neuro-cognitive functionalities rehabilitation.
- ✓ Applications for communication.
- Incubated in I3P (Enterprise incubator of Politecnico di Torino) from 2007.
- Takes part in medical-scientific research projects where PC technology meets neurological aspects.
- In 2010 Sandro Sartor joined the company, bringing new competencies and refurbishing both the program and the commercial offer, creating a professional and devoted working team.

Context



Growth in Brain Fitness SW Application
(Sharp Brains, 2008)



Italy: status and trends.
4.36% of population is affected
by minor or severe cognitive
disabilities (A. Castello, 2012)

Treated Pathologies



- Cognitive impairment, both acquired or genetical
- Improvement of intellectual capabilities
- Treatment of specific cognitive inabilities
- Slowdown of cognitive natural decay
- Treatment of learning inabilities
- Training of metalinguistical capabilities
- Aphasy

Technological Proposition



End-users:

- Easy access to the application, via the carefully designed touch-screen interface
- Real-time results checking and immediate feedback
- Anti-aging cognitive stimulation
- Anti-depressive and self-esteem reinforcing, thanks to intellectual stimulation
- Improvement of cognitive performances both of development (scholar) and regressing (aging) ages
- Possibility of using the solutions at home

Benefits (I)

Care Providers and Medical Service Community:

- Increase of cognitive-rehabilitation offer
- Significant value-added for the structure, perceived by patients and families
- Optimization of cognitive therapy administration (more seats for a single caregiver)
- Creation of *Stimulation Profiles* to ease therapy administration and management
- Centralized system for data collection and monitoring, integrated statistical instruments
- Opportunity to take part in projects financed by public and private bodies

Benefits (II)



Patients and Family:

- Therapy delivered at home
No travel, no stress, no wait in-line, no reservations
- No constant need of professional follow-up
- No need of specialized equipment
- Freedom of choice in exercise training
- Family members or caregiver involvement in exercise
- Can be fun

Target Usage



- Care/rest homes
- Hospitals
- Wellness centers
- Speech therapists
- Cognitive rehabilitation professionals
- Schools and Universities
- Pharmaceutical companies
- Some of our Users:
 - ✓ Pro Infantia Koelliker Hospital
 - ✓ FONDAZIONE FERRERO
 - ✓ Mediation ARCCA
 - ✓ Home-Instead Senior Care
 - ✓ San Luigi Hospital

Sperimentation

- **Sperimentation Brainer I (Lisem)**

Goals: Evaluate cognitive stimulation effectiveness in MCI subjects.

Place: Istituto Carlo Alberto, Torino

Results: A statistically verified improvement in the areas of memory / “compito di denominazione” ($p < 0.05$) / abilities in constructive movements ($p = 0.095$) / general mood ($p < 0.05$) from T0 to T1 in subjects that has been using *Brainer Professional* in a period of 4 months.

The evaluation has been achieved by using neuropsychology evaluation grids (MMS, Cornelly Scale, Geriatrix Scale, ecc.) at T0 time (Training beginning) and T1 time (Training end)

Sperimentation

- **AD (Alzheimer/Down) (Proteinn) Project**

Goals: Training of Down children with *Brainer Professional* in order to become tutor for other children and eventually tutors for Alzheimer patients

Place: CE.PI.M. Ass. Genitori Bambini Down

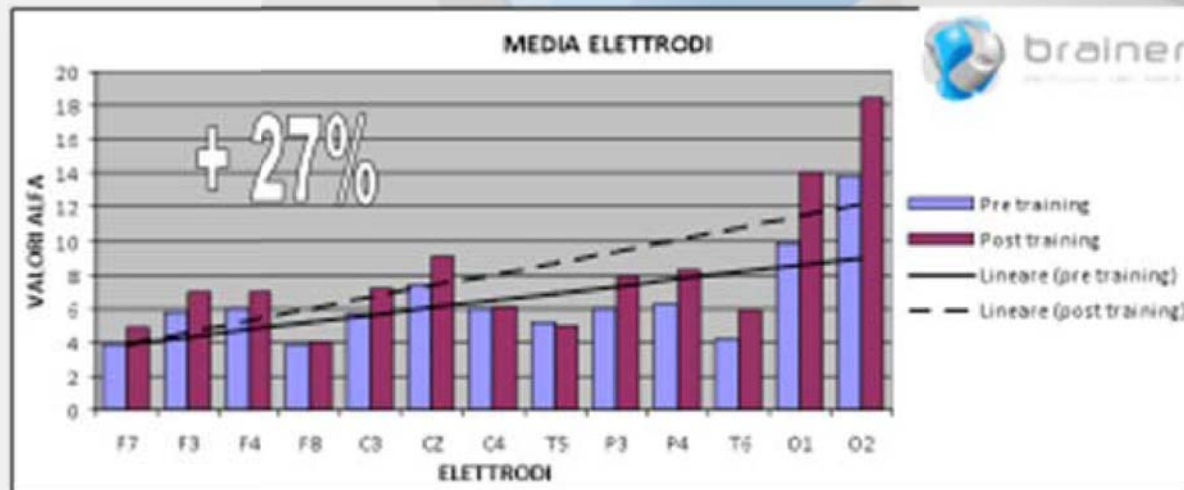
Results: The project has been successful with the result that the trained Down children become valid tutors with both other childrens and, in a second stage, with Alzheimer patients hospitalized in “Convitto Felicita di Savoia di Torino/Opera Pia Lotteri di Torino”

Sperimentation

- **Sperimentation Brainer II**

Goals: Evaluation of cognitive stimulation in normal subjects

Results: It has been statistically proved a 27% increase of the alpha electroencephalographic rate following one month of *Brainer Professional* usage, three time a week.



Competitive Differentiation

Competitors

- Nintendo Brain trainer
- Luminosity

Both targeted at a casual audience, for gaming purposes

Brainer

- Scientifically validated
- Accredited by Italians' Health Minister

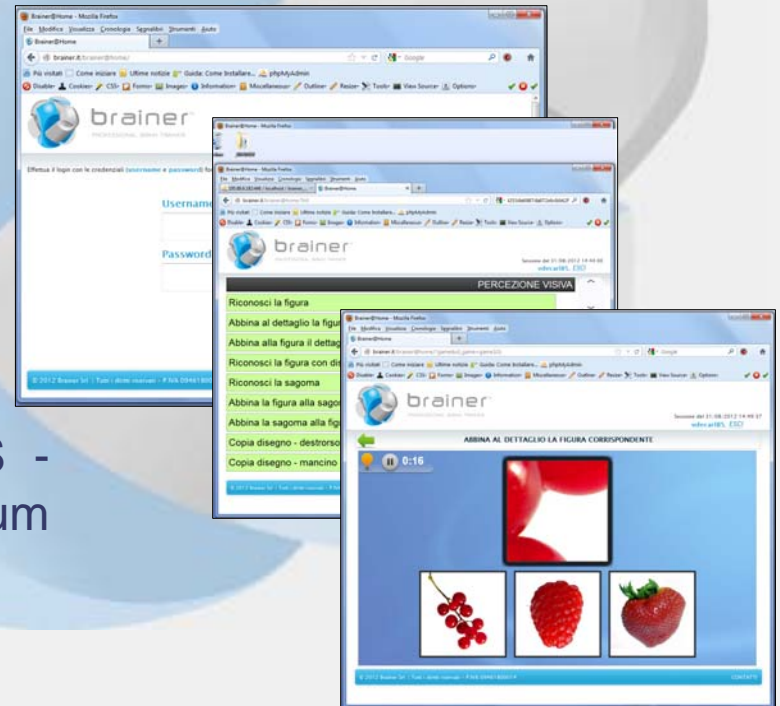
- Currently used in 20 different sites
- Scientific evidence of cognitive functions improvement

Brainer Full & Brainer Web



Brainer Professional Full

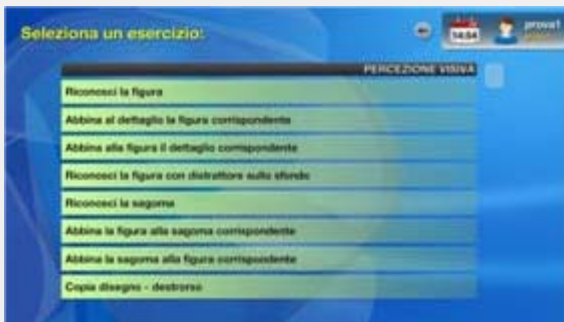
PC&software or software together with the full offer of 70+ exercises. Remote sync capability. Management of separate Clinical Chart for each patient.



Brainer Professional Family via Web

Exercises offered via web, with the SaaS - Software as a Service paradigm, for maximum flexibility.

How Brainer Works



Exercise Set



- Visual Perception
- Auditive Perception
- Attention Span
- Language
- Reading and Writing
- Calculations
- Logic and Deduction
- Memory
- Personal Images

Other Functionalities

- Management of patients clinical data: personal data, anamnesis, standard tests scoring, and scoring of online tests executed with the training
- Training profiles management, i.e. the possibility to define “ad-persona” set of tests, or “ad-hoc” set of tests for related pathologies; in order to simplify and optimize times and means of therapy administration and at the same time increasing therapy effectiveness for both patient and caregiver
- Data management and synchronization, allowing centralized and multicentric data collection and data analysis for statistical classification. Data are graphically available on-line for patient scoring
- Automated SW update and version synchronization for all installation active in a givens et of medical premises; sharing of common patient data bases

Brainer Scoring

Individual letters

10:16 Leonardo

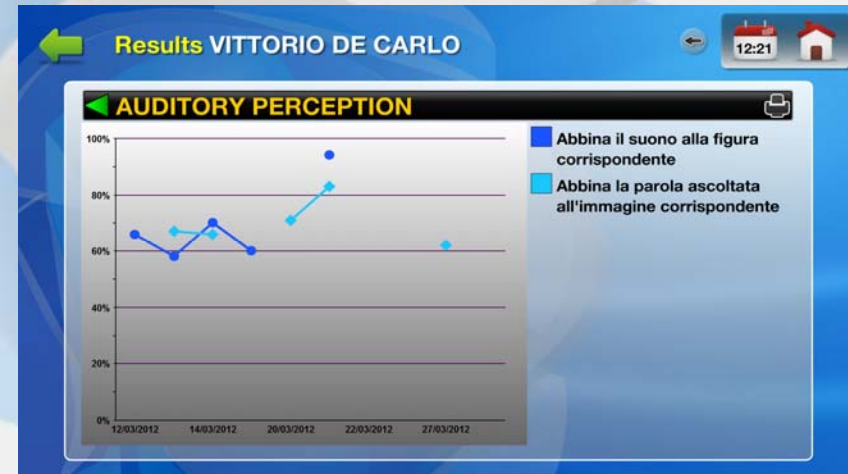
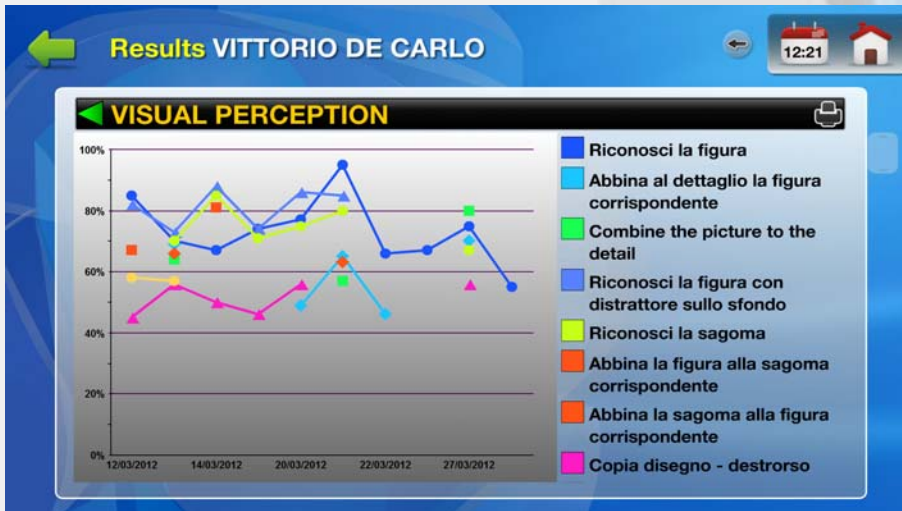
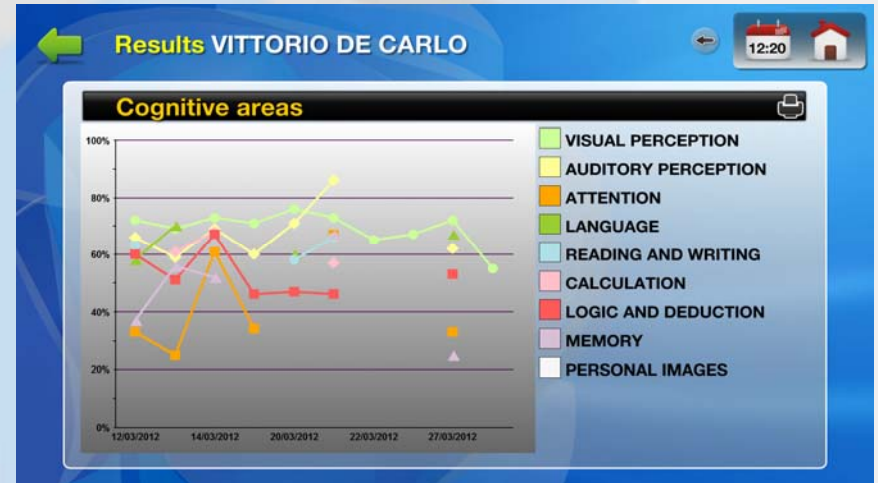
0:01

0:20

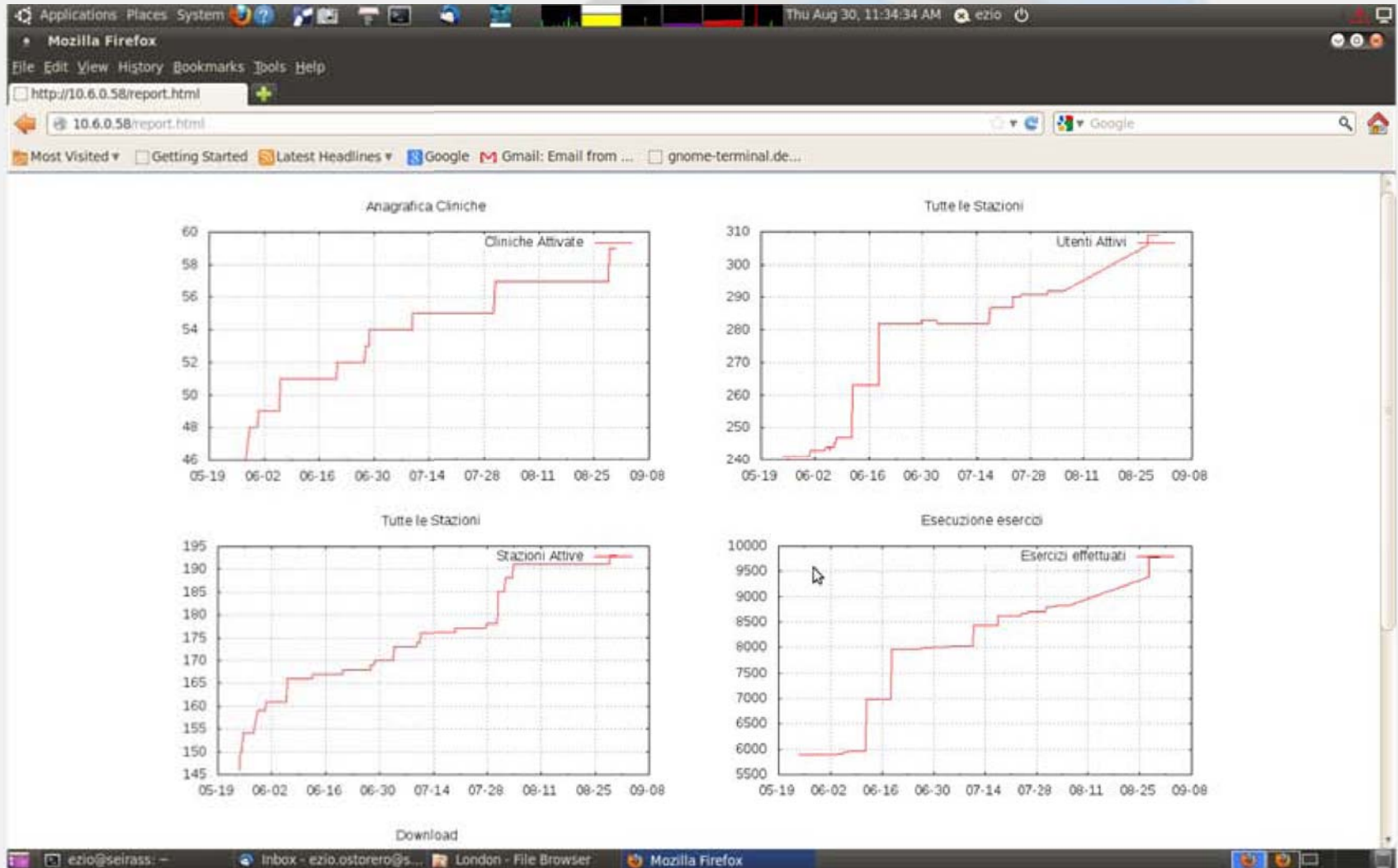
4 risposte corrette

una risposta errata

Ripeti l'esercizio



Brainer Stats



Brainer Reports

Result

select * from game_utenti order by data_aggiornamento;

cod_utente	nome	cognome	c_f	data_nascita	sesso	scolari	id_clinica
VB100036010003	5eqYYXJ2mmQ2eBoe8K9Hw==	hq3Ios5vHV=	02a+Xl50sGyZze0YoD0ulZDZ4Gh7wr0f	1951-04-09	M	0	100036
VB100036010005	5ykK7wYQkdo=	Qh9Snuq5IA=	02a+Xl50sGaiPum+JhUS7JDZ4Gh7wr0f	1925-01-23	F	0	100036
TO100015020001	F4aP3q9Yqg=	sxc9Pz8S/Y=	2JTl3B/3gsk=	1980-01-08	F	3	100015
TO100015020002	JtBQT1vdYbxd1uBTuyPKxQ==	cpr7bz28vWE=	2JTl3B/3gsk=	1977-01-12	F	2	100015
TO100015020003	Ht2s7H19CM=	RY+BrqqJ1o=	2JTl3B/3gsk=	1980-01-14	F	2	100015
TO100015020004	m+0M+b7xflTg0rmH1rxXKw==	SeyMNNEN2ps=	2JTl3B/3gsk=	1979-10-10	M	3	100015
TO100016020002	QcSLshU+vLl4yxpZfD/Zg==	0RxcyW5Za2Y=	2JTl3B/3gsk=	1978-01-10	F	3	100016
TO100016020003	HdUj8enwy1w=	QhthTrVKz/8=	2JTl3B/3gsk=	1981-01-11	M	2	100016
TO100017010001	89VNPbFGsgYlOXcH/eCyQ==	p7RWfrEsBIM=	2JTl3B/3gsk=	1956-01-21	M	0	100017
TO100017010003	bUPhQngln+Y=	C0o3hv6sGltmwtqrKKEWA==	2JTl3B/3gsk=	1944-08-18			
TO100017030001	0DK6ITglozg=	0DK6ITglozg=	2JTl3B/3gsk=	1971-01-15			
TO100017040001	4bDWHQYvPjk=	XlJshpComV2N7XrOIH95tA==	2JTl3B/3gsk=	1967-04-16			
VB100036010006	qP+HfYr+do=	lW52tu++N+E=	lVGFg54Xd7rwHVHJU+sgpDZ4Gh7wr0f	1945-06-25			
VB100036010007	m0BulZKDQHQ=	3gvISF8Y8Xa8s7gUaU/PQ==	z2woits3jWlPum+JhUS7JDZ4Gh7wr0f	1928-10-19			
TO001018010001	6BS442Wk57g=	V3di89K7r8d=	C8ue+xxYTHhVc637npTNU5dwr94LJ	1974-01-29			
VB100036010008	EIJ+MKJWEUK=	lnlCHI+5Puw=	5tmH8XMfDnkOROQ2cWjNBpDZ4Gh7wr0f	1940-11-27			
TO100015010001	ludh0jca5HbMOXcH/eCyQ==	+wqDrhJTRlVlOXcH/eCyQ==	2JTl3B/3gsk=	1984-01-13			
TO001008010001	kk9lRmGZLzW=	ydPIFAI9ZuYlOXcH/eCyQ==	0bKwP35rxDF4BASUWwklA9lU5dwr94LJ	1980-01-10			
TO000232030001	n/g5TdH7s9E=	/L6WpZJTuM=A	9557YPng942E1A7NaR6FZ2Zr/ezgLLoy	1980-01-06			
TO200002010002	B3vay6wSChw=	wdFQk5OxTf7sqPi4VbL2g==	l5R0lA0khsI=	1971-01-02			
VB100036010010	HPUY9wOjB4Q=	pCpkPx7WeiQ2eBoe8K9Hw==	W7rsFFGfRv9lN23/mHJJApDZ4Gh7wr0f	1934-05-30			
TO100037010002	zpk9LRFf1g=	zvoWvmQ2uVg=	Oc05cJly5F8=	1920-08-27			
TO100037010003	d3HgOU4OFCM=	ch3CINlNlUg=	Oc05cJly5F8=	1922-04-03			
TO100037010004	k+FNZmAYn8Ze4lF4vK/RCA==	ghmpjmb1N1Q5zTlwmXlkXw==	Oc05cJly5F8=	1933-07-14			
TO100037010005	GEX3TAShLkLk=	l12EzslJd9s=	Oc05cJly5F8=	1925-08-06			
TO100037010006	RjwPomeu2Uc=	/P+UjOCN4M=	Oc05cJly5F8=	1922-10-28			
TO100037010007	mWvBvAN7TDR=	lU0QuCFw70A=	Cv05vTl5RBR=	1906-12-11			

Next Steps



- Autism, dyslexia, kids and development-age disorders
- Portable terminals: tablets, smartphones
- Eco-games: exercises in ecological-environment (house, hometown, familiar places)

Questions?



Questions?



Questions?

