

**Summary**

1. **Volume of investments required – \$ 7300 thousand.**
2. **Production** – Low-noise wide-band amplifier of current with active elimination of own noises (LONWIBAC).
3. **Trade marks** – none.

**Company profile**

**Date of establishment:** December, 2002. Trend of activity – scientific research, experimental design, production, evaluation (RDT&E), Fabless technology.

**Signs of public recognition** – participant of the Special Economic Zone of Techno-Introduction type in Khabarovsk District, as the general resident in development of the trend “Design of integral chips based on low-noise wide band amplifier of current of Olexenko-Kolesnikov type” (2005); Medal of Russian Academy of Nature Sciences “For prominent scientific achievements in the area of noosphere technologies” (2005); Diploma of Investment’s Fair at the APEC Forum (2002); Diploma of Exhibition in the “Russian innovations for APEC” Fair (2006); Certificate of a participant of the “First Pacific Venture Area” (2007).

**Number of employees** – 8 persons, and 12 persons temporary.

**Team**

**Sysoev Igor** – Director General, 58 y.o. First Vice-President of the Pacific International Consortium “High Technologies”. 16 years of business experience in managing a company.

**Olexenko Victor** – General Designer, 50 y.o. The full member of International Academy of the Authors of Scientific Discoveries and Inventions (MAANOI). Correspondent member of Russian Academy of Natural sciences. The author of 20 scientific papers and 4 inventions in electronics.

**Korochentsev Vladimir** – General Designer, 58 y.o. Doctorate in Physics and Mathematics, Professor, the Head of Hydroacoustics Department in FENTU (Far Eastern National Technical University), member of International scientific society IEEE. The author of 130 scientific papers and 10 inventions.

**Products characteristics:**

- A) “LONWIBAC” has no deviations in parameters evoked by alteration of temperature, ageing of crystal, etc. The possibility to perform 10 times less noise arose, when comparing to the best world analogues.
- B) “LONWIBAC” possesses three stable states (+1), (0), (-), that admit on its base as the basic element of vague logic (FUZZY adder) and being “Universal Bridge Inverting Adder” to create ternary computing machines, which are at the moment a new generation of electronic technical systems of different destination with elements of artificial intellect.

**Marketable advantages:**

1. Superlative sensitivity.
2. In practice the drift of zero (deviation from zero) is absent.
3. Three stable states: (+1), (0), (-).
4. High durability to radiation.
5. Utmost minimal consumption of current.
6. Wide band of amplified frequency.
7. Coherent automatic deletion of internal noises of different origin excluding quantum ones.
8. Suppression of internal noises in following cascade, that is switched on to output.
9. Great dynamical range of input signals.
10. Automatic choice of optimized work mode.
11. Wide spectrum of application.

**Comparison with analogues:**

1. “Low-noise wide band amplifier of current with active elimination of own noises”

Parameters	Planned year to market presentation – 2009	USA “Analog device”	Maxim Dallas Semiconductor Inc. (USA)
	МШУТ	Amplifier AD 797	Amplifier MAX 414
Spectrum density of noise at frequency 1KHz, nV/Hz <sup>1/2</sup>	<b>0.3</b>	<b>0.9</b>	<b>1.8</b>
Temperature drift (deviation) from zero	absent in practice	Min 3mkV/C°	~ 15mkV/C°

2. “Universal Bridge Inverting Adder” (UBIA).

Basic electronic component of vague logic FUZZY adder has no design analogues in the world, it is new generation of electronic technical systems of diverse destination with elements of artificial intellect.

*Rights of ownership for the subjects of intellectual industrial property.*

a) Russian patent on "Low-noise wide band amplifier of current of Olexenko-Kolesnikov type" № 2178235, priority on 29.09.2000.

b) Application for the Russian patent award from 04.05.2007 № 2007117392, named as "Universal Bridge Inverting Adder".

#### **Current state**

1. Advance of project "Development of integrated microcircuits based on LONWIBAC".
2. Searching, exploration, patents investigation, registration of invention.
3. Research work in the field of ternary processor model creation.
4. Production activity.

#### **Development strategy**

Development of business, founded on design, production ("FABLESS" technology) and export of the integrated chips based on LONWIBAC to the world market. Cooperation with the companies leading globally in the sphere of microelectronics. Formation of "growth points" in global economics.

#### **Use of funds**

- |   |     |
|---|-----|
| 1. R&D (design of industrial topology of chips)     | 3%  |
| 2. Manufacture of production ("FABLESS" technology) | 73% |
| 3. Marketing  | 24% |

#### **Prospective outcome of investment**

Serial production of the item "Low-noise wide band amplifier of current with active elimination of its own noises". Design of integrated microcircuits on the base of LONWIBAC.

#### **Marketing & Markets**

##### Global market of microelectronics.

According to data of analytical company "IC Insights", to 2008 all global sale of semiconductors would reach \$ 300 bln (in 2006 it was about \$ 261.4 bln); to 2011 this market of semiconductors must be growing up to tremendous figure of \$ 400 bln.

##### *Marketing and market channels:*

- management of market channels;
- participation in the international exhibitions, practical scientific conferences;
- generation of stable connections with leading producers of electronic engineering;
- creation of the university's programs and educational laboratories;
- application in traditional and telecommunication mass media.

##### *Consumers:*

1. *Producers of integrated chips:*  
microcircuits for the systems of fiber-optic and wireless communication; video and audio amplifiers; components for telemetry systems; transducer of information.
2. *Suppliers of electronic components.*
3. *Manufacturers of electronic engineering:*  
navigational apparatus; medical diagnostic apparatus; home appliances and communication apparatus; scientific research (nanotechnology) and experimental testing apparatus; telecommunication systems with the elements of artificial intellect.

#### **Interaction with investors**

We are ready to offer 20%–30% share of the company to investor. Time of refund is 4–5 years.