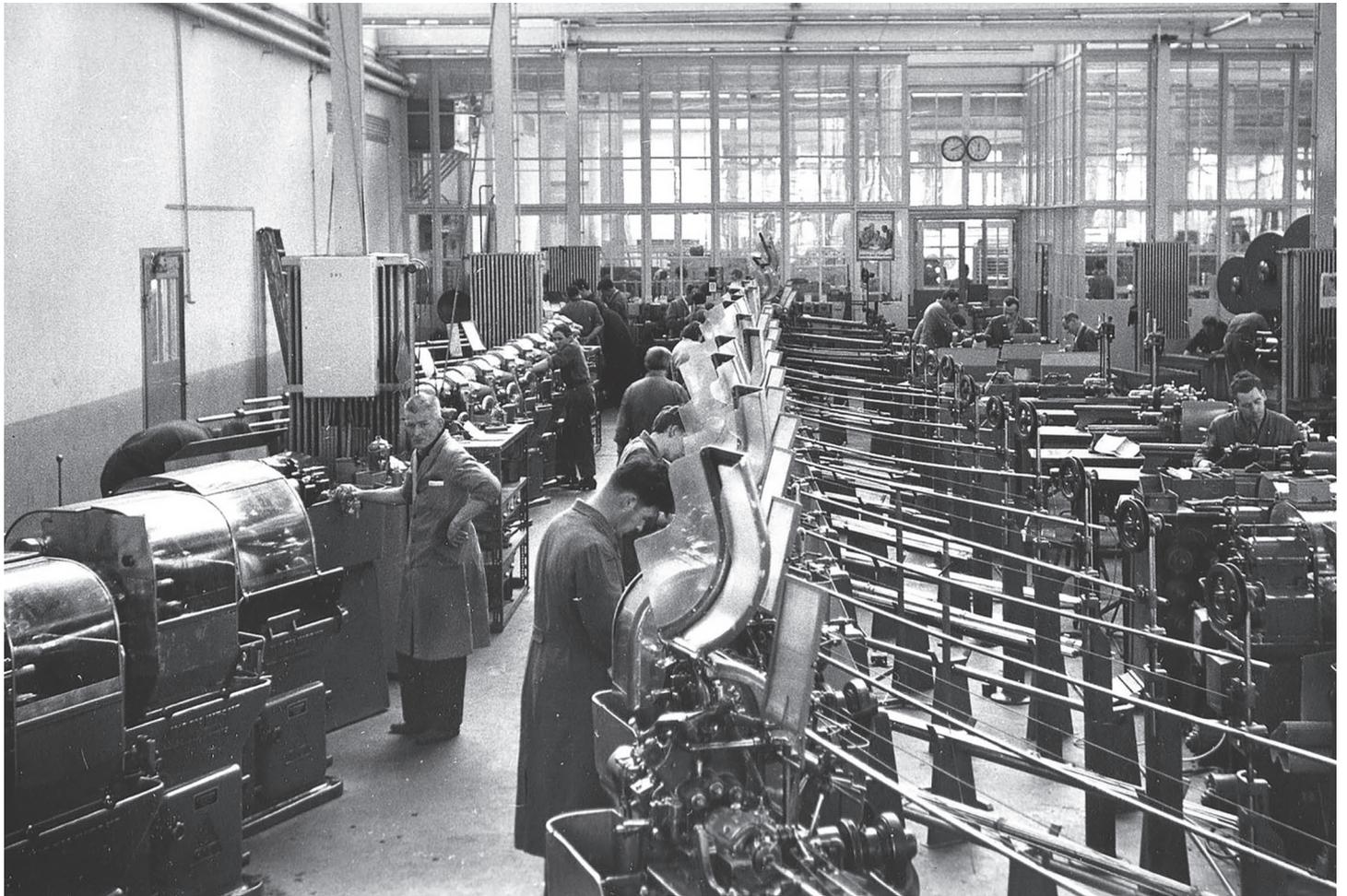




A journey through time
with SBC



Drehbänke

Company history

Tradition and innovation

Saia Burgess Controls has developed, produced and sold industrial-grade electronic components and systems for control and automation technology since 1920. To this day, we have worked according to the bottom-up principle. This means basing our development and production process on users' needs.

From early mechanical switchgears to efficient control and automation solutions for integration into 21st-century IT systems.

The roots of Saia Burgess Controls (SBC) stretch back to the start of the 20th century. In 1920, the company «SAIA AG» (Société Anonyme des Interrupteurs Automatiques) was founded in Bern. Time-controlled switchgears enabled the first automatic control sequences. Motors and switches were used in a range of applications and were constantly developed further. Meanwhile, the company «Burgess Products Ltd»

was founded in Hinckley (UK) in 1935. This business became a pioneer of modern microswitch mechanisms. SAIA AG belonged to Landis+Gyr from 1936 to 1986. In 1951, the company moved from Bern to Murten, and expanded its site on Bahnhofstrasse. Just ten years later, an additional building, Plant 2, at Freiburgerstrasse was inaugurated. **In the year 1978 – under the name PCA (Programmable Controller – Generation A) – followed the first generation of our Saia PCD controllers and thus the entry into the current business field.**



Electroplating / surface preparation



A clockmaker at work



Time switches for automatic staircase lighting systems



Long-terms tests to rule out damage mechanisms

In 1986, SAIA AG was sold to Burgess Products Ltd. The following three years saw two takeovers by finance groups. In 1989, the two companies were combined under the name Saia Burgess by Williams Holding.

This time also saw the second generation of PLCs released on the market – the PCD (process control device).

New business segments were launched in the years that followed, including the production of millions of stepper motors for the automotive industry. Leadership of the company returned to Switzerland in 1996 following a management buyout. In 1998, the renamed Saia-Burgess Electronics AG went public on the stock market.

In 2001, Saia-Burgess Controls AG was founded with the aim of supporting the continuing growth of the controller division. This gave new impetus of further innovations, such as **web technology** for industrial controllers. In 2005, the entire Saia Burgess Group was

acquired by Johnson Electric from Hong Kong, a global player in small electrical drives. Within two years, it succeeded in integrating the industry and automotive divisions into its own structures. Saia-Burgess Controls AG remained a separate unit, focussing on controllers, **HMIs** and electrical meters. With the ownership of Johnson Electric, the period beginning in 2005 saw high investments and countless innovations in production and logistics as well as the introduction of **lean production**. SBC continued to develop its winning formula for open communicative controllers and decided to move away from proprietary technologies and protocols. Saia PCD controllers are systematically based on open, recognised standards from the worlds of industry and IT. This helps protect investments across the entire life cycle of a system. In 2012, Saia-Burgess Controls AG was acquired by the American company Honeywell Inc. This opened up new opportunities for SBC in Asia and the Middle East. SBC – over a century of guaranteed quality.

1983



André Gross

*** 35 years ***

*Job title 1983:
Development Engineer*

*Job title 2018:
Sales Manager
Switzerland & Austria*

2018



What were your duties back then?

A range of engineering work (HW-FW-SW) on the first Saia PCA controllers.

What in your opinion was the most successful product back then?

The PCA0-1-2 range which benefited from an operating system developed in Murten and allowed several programmes to run in parallel. Nowadays, we talk about «multi-tasking».

What professional challenge did you face?

Producing software for the PCD family which is able to operate the four serial interfaces in less than 1 ms in order to give the PCD time for control and regulating tasks.

Which particular event do you like to think back to?

The unveiling of the PCD2: from a cardboard model and the development work to a mass-market product in just a year! That was excellent teamwork!

Which was your best company anniversary to date and why?

It was 1995 (75 years of Saia) – an unforgettable moment for me. I appeared with the artists from «Zirkus Gasser» in a number as a clown musician.

What did you dream of as a child (before you ended up at SBC)?

One of my dreams was to become a lawyer. I even learned Latin for this. But sales is virtually the same...



Sales Switzerland in 1964: Messrs Briod, Tschudin and Ebner with a secretary



Construction and MILTAC laboratory with Georg Busch and Theo Hofer



Pneumatic valves / air switches

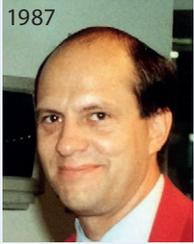


Deep drawing metal housings



Punching tool

1987



Enrico Fiechter

2018



*** 31 years ***

*Job title 1987:
Product Support PLC*

*Job title 2018:
International Sales Manager*

What were your duties back then?

My job was «Product Support PLC». Back then, there were very few PCs in the company. Everything was done via phone or telex. We took on an additional task – editing the user manuals for our products.

What in your opinion was the most successful product back then?

The PCA0-OEM could be used in an extremely wide range of areas.

What professional challenge did you face?

There were no screenshots back then and remote access was not possible. This meant having to listen carefully to emotional explanations from a range of cultures (Italian, German...).

Which particular event do you like to think back to?

The introduction of the PCD4 in Eastern Europe (1990 in Hungary, 1991 in Poland). The Berlin Wall had just fallen and these were completely unknown countries. These were very touching moments for me personally.

Which was your best company anniversary to date and why?

75 years of Saia in 1995. The «Zirkus Gasser» tent for us alone. A dinner show that we were invited to with our partners and an open day for our families at the factory.

What did you dream of as a child (before you ended up at SBC)?

Becoming a pilot and discovering the world... With SBC, I have travelled more than a hundred times. So my dream came true.



Production



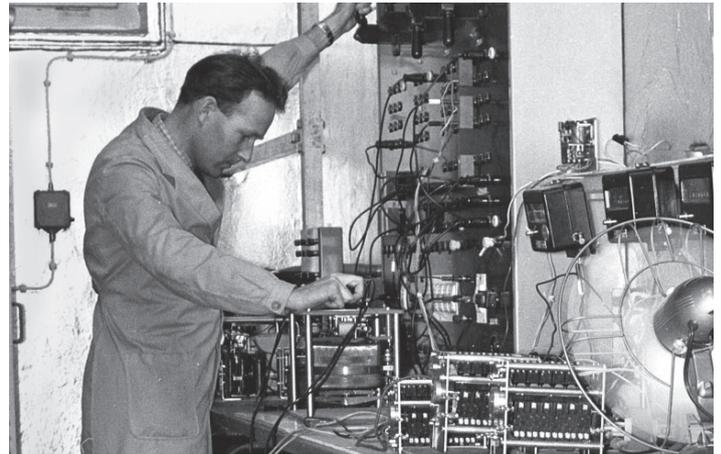
Who is hammering there? Shipping Manager Fritz Spycher!



Mr Fontana checks the raw materials



Ursula Heim during production



The so-called «torture chamber» for switches and motors

1983



Arno Kloiber

2018



*** 35 years ***

*Job title 1983:
PLC Support*

*Job title 2018:
PLC Technical Editor*

What were your duties back then?

Support for PCA and training customers.

What in your opinion was the most successful product back then?

The Saia PCA1.M4x. We affectionately called it the «baking tray» and it literally sold like hot cakes.

What professional challenge did you face?

Although I was originally an electrician, I retrained as a PLC supporter/programmer/advisor and took on responsibility for customer training.

Which particular event do you like to think back to?

The exciting switchover from the PCA to the PCD family.

Which was your best company anniversary to date and why?

The 75-year anniversary was cool. We had an «open day» and all the employees then went to see «Zirkus Gasser».

What did you dream of as a child (before you ended up at SBC)?

When I was a boy, I dreamed of becoming a helicopter pilot. [Editor's note: Arno now flies a drone the size of a helicopter instead ;-)]



Microswitches/installing contacts

A brief detour back to the wild and colourful 1980s



Production Manager Claus Windler – a desk without a PC



Personnel Manager Josef Odermatt – in what year was smoking banned in buildings?



Production Manager J.P. Aeschlimann – well organised in spite of the chaos



The secretarial office with the latest typewriter – evidently there were crazy cat ladies throughout SBC's history



Mikron 78 lathe

A direct comparison of products then and now

	1978	2015
		
	PCA1.M10 «baking tray»	PCD2.M4560
Slots	8	4 + 60
Current	1000 mA	600 mA
Cycle time	70 μ s	0.1... 0.8 μ s
Resolution	8 bit	32 bit
Input voltage	24 V	24 V
Inputs	64	1024
Outputs	64	1024
Programme memory	1kB... 8 kB	2 MB
Interfaces	PGU	max. 14

	1988	2009
		
	PCD4	PCD3.M5540
Slots	6	4 + 60
Current	600 mA	600 mA
Cycle time	2... 6 μ s	0.1... 0.8 μ s
Resolution	32 bit	32 bit
Input voltage	24 V	24 V
Inputs	512	1024
Outputs	512	1024
Programme memory	428 kB	1 MB
Interfaces	max. 6	max. 13

1988



Urs Jäggi

*** 30 years ***

*Job title 1988:
Product Support Engineer
«Programmable Logic
Controllers International»*

*Job title 2018:
Portfolio Manager*

2018



What were your duties back then?

Providing technical advice and training for our international sales companies and customers in Europe.

What in your opinion was the most successful product back then?

The PCD6 controller was a multi-processor system with up to six CPUs and serial bus communication (LAN2), a very innovative and powerful control system for the time.

What professional challenge did you face?

Firstly, I moved from the German-speaking part of Switzerland to Western Switzerland where people speak French and the «Senslerdeutsch» dialect. Secondly, there were hardly any electronic aids back then. Presentations were drawn on transparent sheets by hand using a «PowerPen». Fortunately, this did not result in a «sheet fight» and we were able to concentrate on what mattered.

Which particular event do you like to think back to?

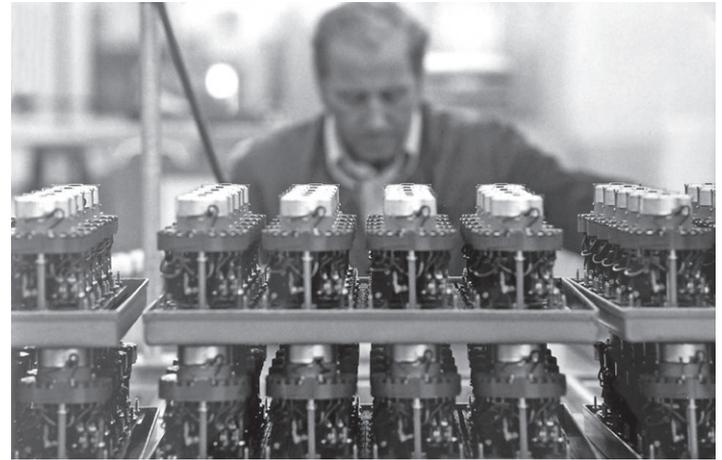
A big order in 1996 from Deutsche Telekom Immobilien GmbH worth DM8 million. This project helped SBC to develop and has generated a great deal of business since then.

Which was your best company anniversary to date and why?

Without doubt the 75-year anniversary. The Zirkus Gasser tent was reserved for staff and their families. We saw an entertaining circus performance and enjoyed some great food.

What did you dream of as a child (before you ended up at SBC)?

When I was young, I dreamed of an ice hockey career. Nowadays, I regularly take part in sport to compensate for my stressful job (racing bike, bike, inline skating, cross-country skiing, tennis...).



Electromechanical time relay



Clockmaker



AVOR (work preparation)



Technical office



Chemical laboratory, Mr Walliser



Even Dällebach Kari worked at SBC?!

Tricky questions about SBC technology from 1978

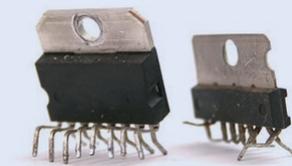
Good luck!



First SBC programming device

During the 1970s, SBC used a device with 16 buttons for programming: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, L, E, C, -, +, A. Programming was often done in pairs: one person read out the command code and the other person typed it in. What was this programming device called?

- 1A PCA2.P10
- 1B PDP11
- 1C PROGR10
- 1D PCD2.P21

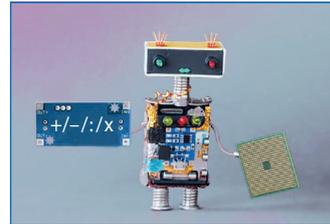


PCA series microprocessor

The user programme is read and interpreted, inputs are queried and logically linked to each other, outputs are set and data are stored in internal registers.

Which microprocessor was used to control the PCA1 and PCA2 series?

- 2A Z80 from Zilog
- 2B 8085 from Intel
- 2C 6510 from MOS
- 2D Pentium from Intel



Command set for the PCA series

It included instructions for logic links, time and counting functions, jump and wait commands, parallel and subroutine techniques, the inputting and outputting of BCD or binary coded values and arithmetical functions (+/-/:/x).

How big was the command set?

- 3A 100 commands
- 3B 64 commands
- 3C 50 commands
- 3D 32 commands



PCA series programme memory

The PCA used various programme memory types: buffered RAM, non-buffered RAM and EPROM.

An EPROM made sense for permanent operation. What loading device was used to load an EPROM?

- 4A CONITEC GALEP-3
- 4B DIAGNOSTIC 1 MB
- 4C PCA1.P15
- 4D ertec PGS 49

We will sign out here
and wish you all a good evening!



Answers to the quiz questions: 1A 2B 3D 4D

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