

Credits

An adventure by **Dominic Hladek**

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The Ether Calculator

By Dominic Hladek

Foreword

The adventure module **The Ether Calculator**, which you are holding in your hands or viewing on your screen, was my first work for the roleplaying game *Space: 1889*. Back then in 2012 the roleplaying game was quite new on the German market. I spotted it for the first time at an RPG convention and was fascinated right from the beginning. As a computer scientist who read “The Difference Engine” by William Gibson, it was obvious that I would write an adventure about analytical engines. Soon after, it was published at first in a German anthology and now, a few years later, was supplemented and translated to English. I hope that you and your party enjoy the plot and have fun finding some of the “computer science Easter eggs”!

Frankfurt (Germany), February 2017
Dominic Hladek

Overview

The adventure before you will take you and your players on a journey through the world of analytical engines in *Space: 1889*, testing the latest German calculator on its maiden voyage through the Ether. In the first chapter, ‘**A calculated Assassination**’, the characters are invited by industrialist *Guido Henckel von Donnersmarck* to tour the *Silesian Analytical Engine Productions (Schlesische Analysemaschinen-Produktion)* facility, to attend the unveiling of the mainframe ‘Old Fritz’. This prototype is to be installed aboard an ether zeppelin to provide certain calculations and break the calculation speed record. This confident demonstration of scientific spirit and engineering ingenuity will

be interrupted, however, by an assassination attempt on the lead scientist *Margarete Henckel von Donnersmarck*, daughter of the host. It will be up to the player characters to save her. Initial clues will indicate that one of the programmers of the analytical engine must be behind the cowardly attack. The player characters will be asked to quickly and discreetly investigate this crime and will be able to identify and seize the perpetrator by following the clues.

In part two, ‘**Attack of the Ether Bugs!**’, the characters will be joining the test flight of the ether flyer along with several other guests of honor and will journey into the near-earth Ether. During an evening gala intended to coincide with the breaking of the calculation speed record by the analytical engine, a meteoroid will slam into the envelope of the zeppelin. Disaster is narrowly averted as the meteoroid gets lodged in the breach, but a swarm of strange ‘Ether Bugs’ pours into the engine rooms of the zeppelin and threatens to damage the calculator and fully disable the zeppelin. The player characters are called upon again to help and go bug hunting.

In part three, ‘**The Von Neumann in flames**’, the loss of flotation gas will force a premature reentry into the atmosphere. Just before the unplanned landing in New York, the meteoroid will tear free of the hull of the zeppelin, causing a complete loss of control. For a final time, the player characters are called upon to be the heroes of the hour and to evacuate as many people from the hydrogen-filled vessel as possible and assist in the emergency landing attempt.

During all these exciting events, the player characters will encounter several historical individuals—though they may have grown up to be somewhat different people in the world of *Space: 1889* compared to our real history.

The **Appendix** includes maps, player handouts and an article on the role of analytical engines in the world of *Space: 1889*, as well as additional rules for their use in the game. This information can be used in other adventures as well.



A Calculated Assassination

Introduction

The adventure begins with an invitation by industrialist Guido Henckel von Donnersmarck or his scientist daughter, Margarete, to come to Wroclaw. This Silesian metropolis has become a rapidly growing industrial hub by the end of the 19th century; with half a million inhabitants, it has even become the fifth largest city in the German Empire. Guido is the majority shareholder of the local Silesian Analytical Engine Productions company, and his daughter is the lead scientist on the mainframe project 'Ordnation Fabricate OF 2001'. Everyone calls the machine 'Old Fritz', however, after the Prussian king Friedrich II, who made Silesia part of the Empire. It is soon to be installed on the ether zeppelin 'Von Neumann' for a test flight, which is why Guido and Margarete are now inviting the press, financial backers, friends, and anyone of status to gather support for the project. And indeed, the papers are reporting eagerly on the ambitious plans by the company. The groundbreakingly fast machine is specially adapted for ether journeys in several key ways:

- It is carefully constructed for optimum operating speed in zero gravity
- It is supplied with motive power by the same solar boilers that also power the engines
- It requires a large amount of space, such as can be found in the envelope of a zeppelin
- It is ideally suited to provide navigational calculations as well as to predict dangerous ether turbulences

Schlesische Analysemaschinen-Produktion

Invitation

Dear Mr. / Mrs.
I would be delighted to welcome you to Wroclaw for the presentation of our innovative analytical engine 'Ordnation Fabricate OF 2001'. After a tour of our facilities we will take off on board the ether zeppelin 'Von Neumann' into an upper Earth orbit to test the machine which is specially designed for operation in zero gravity. There, you will witness how 'Ordnation Fabricate OF 2001' will revolutionize modern ether travel.

Guido Henckel von Donnersmarck

Guido Henckel von Donnersmarck,
director general

Character Recommendations

Why the group or individual player characters will be invited can be tailored to their specific backgrounds.

Nations: Characters from countries other than Germany are still well suited, as Silesian Analytical Engine Productions are specifically attempting to gain international support for this project by inviting foreign press, investors and celebrities.

Archetypes: Suitable archetypes include:

- A Reporter should be impressed by the technological marvel and will write accordingly for his paper
- A Scholar, Inventor or Mechanic could be invited as an expert witness or have been involved in the development
- A Merchant could have financed the machine and might even be a business partner of Guido Henckel von Donnersmarck
- A Soldier or Officer could be an old friend of Guido Henckel von Donnersmarck back from the Franco-Germanic war or otherwise know him through military channels
- An Entertainer or famous Adventurer would likely receive an invitation simply for publicity's sake
- An Agent of the government might be present as an official representative or evaluator on behalf of the city of Wroclaw
- A player character might know Guido or Margarete personally, such as from school (e.g. a Doctor or Clergy)
- All guests are bringing their own staff, which might also include one or more of the player characters

The arrival and introductions can be drawn out or kept short as desired. As a preview of the adventure's themes, attention could be drawn to the punch-card-operated steam organs, which have been placed all over Wroclaw's gothic inner city for the amusement of strolling pedestrians. Surrounding the inner city lie the brick and stone estates of the industrialists, and beyond that the homes and housing for the workers for the many smoke belching factories found further out beyond that, including a facility of Silesian Analytical Engine Productions. It is here that the characters will, after a deep and thorough security check, be greeted by Guido and Margarete. If you wish, you can also hand out the article on "Analytical Engines Then and Now" from the Appendix (p. 34) to your players to provide them with some background information on the subject.

The Wroclaw Dwarves (Artifact 1)

The inventor *Chajim Slominski*, an expert on clockwork and calculators, lives and works in a futuristically-styled complex east of the river Oder. His small mechanical dwarves are currently very popular as souvenirs or gifts for the children of privileged parents and he is swamped by orders.

The wind-up metal figurines are all uniquely crafted and can, depending on the model, walk for a few steps, swing their axes, play tinny music or perform other such functions. These dwarf figurines can be found all across the city. Plaques near each announce the address of Slominski's workshop. If a player character wishes to purchase such a dwarf, it will be ready by the time of departure of the ether zeppelin, and can be used as bait during the Debugging (see p. 19) and even take a few wild swings.

Weight: 10 kg, Cost: £ 15

Wroclaw Dwarf

Attributes: Agility d4, Smarts d4, Spirit d6, Strength d6, Vigor d6

Skills: Climbing d6, Fighting d4, Notice d4, Stealth d6

Pace: 4; **Parry:** 4; **Toughness:** 3

Special Abilities:

- **Construct:** +2 to recover from being Shaken; No additional damage from called shots; Do not suffer from disease or poison
- **Size -2:** Doll-sized; attackers suffer -2 to attack rolls when trying to hit one

The Hosts

1888 Guido Henckel von Donnersmarck, Industrialist

"He who has his thumb on the purse has the power."

— Otto von Bismarck

Background

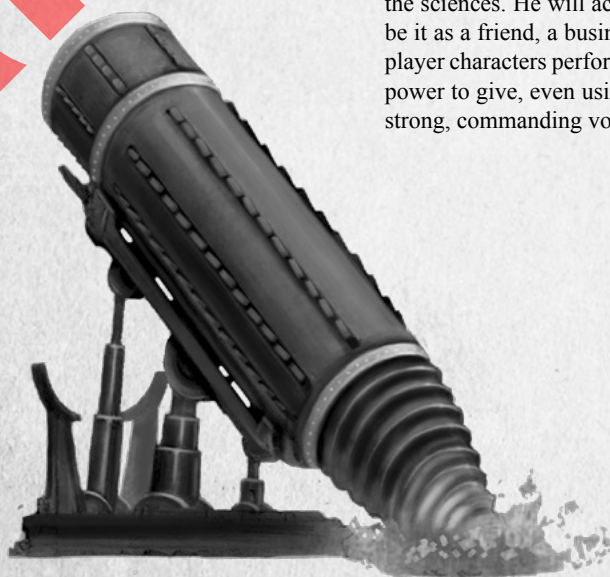
Born in Wroclaw to an Upper Silesian family of large landowners in 1830, Guido von Donnersmarck is now one of the most important industrialists of the German Empire. This good friend of Otto von Bismarck owns countless mines and factories and has some time ago bought a major share of *Silesian Analytical Engine Productions*. He now personally directs a facility.

During his time as town commander in Metz during the Franco-German war, he married the infamous courtesan Marquise *Blanca de Paiva*.

After the founding of the French "République démocratique et sociale" they left France. Shortly thereafter his wife gave birth to their daughter Margarete. In 1884, Blanca died without further children, and one year later Guido sired a bastard son, *Odo Deodatus*. In 1887, he married a Russian woman 30 years younger than him, *Katharina Slepzow*. She does not hold these two children from the previous marriage and affair in high regard. She tried in vain to marry Margarete off, but finally succeeded in getting rid of her and making her happy at the same time by convincing Guido to use his investments into Analytical Engines to secure a man's job for his daughter.

Roleplaying

Guido is a straight-minded, authoritarian and prideful Grand Burgher and is used to giving the orders. Due to his power, no one dares to disrespect him openly. He is quite full of himself, but loves his wife and children above all and will grant them any wish. He acts as a progressive and views himself as a patron of the sciences. He will act as the contact of the player characters, be it as a friend, a business partner, or employer. As long as the player characters perform well, he will grant any aid that is in his power to give, even using his wealth and connections. He has a strong, commanding voice and a firm hand shake.



Stats

Attributes: Agility d6, Smarts d8, Spirit d10, Strength d6, Vigor d8

Skills: Fighting d4, Guts d8, Intimidation d8, Knowledge (Business) d8, Knowledge (History) d8, Notice d8, Persuasion d8+4, Shooting d6, Streetwise d6+4

Charisma: 2; **Status:** 4; **Pace:** 6; **Parry:** 4; **Toughness:** 6

Hindrances: Greedy, Overconfident

Edges: Charismatic, Connections (Business), Filthy Rich, Merchant, Rich

Languages: Czech, English, French, German, Polish

1883 Margarete Henckel von Donnersmarck, Engineer

"I never am really satisfied that I understand anything; because, understand it well as I may, my comprehension can only be an infinitesimal fraction of all I want to understand about the many connections and relations which occur to me."

— Ada Lovelace, née Byron

Background

Born the daughter of industrialist Guido Henckel von Donnersmarck in 1871, Margarete was able to secure a position with Silesian Analytical Engine Productions thanks to the influence of her father and so realized her dream of working on her own analytical engines. Starting at an early age, she began to show more interest in her colorful abacus than in pretty dresses, much unlike her mother, and soon developed a passion for science and technology. She is a dedicated fan of Ada Lovelace. The daughter of the poet Lord Byron, who worked for Charles Babbage, inventor of the analytical engine, is considered to be the first programmer ever.

After the death of her mother when she was 13, her father Guido allowed her a lot of freedom, which she used to deepen her studies into technology and to disgust several governesses. When she was 16 and Guido remarried, the matter of finding her a husband became overdue, but she managed to drive away any and all suitors, nearly sending her barely older stepmother into flights of rage. Her stepmother's suggestion of 'letting the girl earn her own living then' was as sudden as it was unexpected, and soon her father had secured her a position with Silesian Analytical Engine Productions.

Roleplaying

In this world of men, Margarete must assert herself as the 'Mistress of the Gears', as she is referred to by some, on a daily basis. As a defense against male arrogance, she has developed a tough skin and frequently abrasive attitude, even though in apparel and mannerism she ends up presenting herself as more male and distant as well. The 'Mechanical Maid' as others call her behind her back, enjoys presenting men with proof of the gaps in their knowledge. But someone who would meet her beyond the common gender roles and who can prove themselves her equal in intellect might just discover the vulnerable core to her being, and quite possibly win her heart.

Margarete is an ally of the player characters. She is proactive and willing to help in any way she can. She always speaks with a challenging, sarcastic tone. One can never be quite sure whether she is joking or not.

Stats

Attributes: Agility d6, Smarts d8, Spirit d8, Strength d4, Vigor d6
Skills: Guts d8, Intimidation d6, Knowledge (Engineering) d10, Knowledge (Linguistics) d8, Notice d8, Persuasion d8+3, Repair d10

Charisma: 2; **Status:** 3; **Pace:** 6; **Parry:** 2; **Toughness:** 5

Hindrances: Arrogant

Edges: Attractive, McGyver, Rich

Languages: Codes, Czech, English, German, Polish

A Tour of the Facilities

"The Analytical Engine weaves algebraic patterns, just as the Jacquard loom weaves flowers and leaves."

— Ada Lovelace, née Byron

After the introductions, the player characters will be brought to a lounge by the facility director's office, where they will be offered refreshments. They will then have some time to chat with the two hosts as well as the other invited guests, in particular with the representatives of the press and the public. Afterwards, Margarete will be leading the assembled guests on the tour while her father remains in the office. On said tour, the group will for the first time meet some of the Clackers (see p. 10) at work with the analytical engines. The following stops will be featured in the tour:

Entrance Hall

This area features countless display cases with punch cards, gears of all sizes and other machine parts. A staircase leads up to the lounge and the director's office.

Margarete knows everything there is to know about the exhibits. She will explain the basics behind the punch cards and their function: The thousands of holes are a code that can be read by analytical engines and used to initiate specific calculations.

Lounge

The tour will begin and end with drinks on the upper floor of the facility. Padded furniture from the Middle East offers relaxation, the bar provides a range of spirits and a stove allows for the brewing of coffee or tea. A semicircular wall-sized window offers a view onto the park in front of the factory.

The 'butler' of the lounge is an attraction by itself, as he is a mechanical man of iron and brass, controlled by a stack of punch cards in its mouth, just like the Golem of Prague.

He is thus capable of even complex tasks such as brewing tea, and this will be demonstrated to the guests.