



"Let's hear it for us. A whole country is celebrating, and I'm in the middle of it. Hopefully to be continued at the next World Cup championships."

PETER VON NORDHEIM, Wörwag applications technician at the Daimler plant in Wörth, on the converted Actros truck with which the German World Soccer Championship victory was celebrated in Berlin in 2014. The color of the coating was High-Gloss Black by Wörwag.

LOVE OF DETAIL

Full commitment

Las Vegas to Venice, followed by a jaunt to the Matterhorn, then off to Sweden: a journey like that can be completed within a few minutes at Hamburg's Miniatur Wunderland. The perfect settings within the biggest model train exhibit in the world are embellished with countless regular and special vehicles whose life-sized versions are coated with Wörwag products. A trip around a gigantic playroom.

By Michael Thiem; photos by Julia Marie Werner



"A case for the cleanup crew. Whether it involves snow, dirt, or garden waste: municipal vehicles are not only eye-catching, but indispensable in German cities and towns."

ADAM LISON creates base coatings for utility vehicles, including the color Deep Orange, which makes municipal vehicles impossible to miss.



Steep steps wind their way from the picturesque harbor up to the colorfully painted houses. The inhabitants of Riomaggiore can only move through the narrow lanes and alleyways on foot. There are no vehicles in the tiny village. The community in the province of La Spezia on the Italian Riviera is the easternmost of the five Cinque Terre villages. The San Giovanni Battista church dominates the idyllic setting from above—as does Michael Schmidt, who has to take care he doesn't accidentally crush the harbor with his knee.

The 60-year-old has been working on the small-scale replica for nearly six months. He breathes a little more life into Riomaggiore with each detail, which he makes out of wood to a scale of 1:87 with extraordinary precision. Schmidt is a professional carpenter. In his former career he sometimes needed two assistants and lots of man-hours to mount a stair stringer. Now he holds the same side piece between thumb and index finger and places it accurately in a few minutes.

After Schmidt took early retirement five years ago, he joined the 30-strong model build-

ing team at Hamburg's Miniatur Wunderland. "If you know how much work is put into these models, you just have to love them," he says and gazes thoughtfully at the tiny red, orange, yellow, and violet wooden houses. The green hills of Tuscany rise gently up behind them. The artificial grass is electrostatically charged so that the blades stand upright as in nature.

1.2 million visitors annually

Rome, the Ligurian coast, Venice, and Tuscany depict four highlights in the new section



"I think red is pretty cool, because I associate three things with it: love, Ferrari, and Coke. What more do you need?"

SEVASTOS KAVANOZIS, *Division Director Top Coats*. He not only likes to drink Coke, but also has the matching color in his product range, in this case Coca Cola Red for the truck coatings. Wörwag also manufactures the coating for the Coke refrigerators.



that will be finished at the end of the year. The small wondrous world that it will become a part of attracts 1.2 million visitors from all over the world to Hamburg's Speicherstadt, or City of Warehouses. A one-of-a-kind microcosm has been built on 13,993 sq ft (1,300 sqm) in 580,000 man-hours so far, and it keeps on growing. "We are doing everything possible to make sure the exhibit's visitors come in smiling and leave enthusiastic," co-founder Frederik Braun says. The idea has been a success since it opened in 2001. The Miniatur Wunderland Hamburg is

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ranked 6th on the list of Europe's most popular permanent exhibits.

A lion lurking in the arena

What would Rome be without its Colosseum? Teresa Liening is building a replica of the biggest amphitheatre of all time. Well, only half of it, to be exact. That's because the model is cut in half so visitors can see into the interior. There is a lion already lying in wait for a miniature condemned plastic man. "For the first photographs," Liening says with a chuckle, just coming from the milling work- →



"I like to put out fires for our customers. Otherwise, I'm quite happy when the fire trucks drive past me."

THOMAS BAJOR, *Wörwag Applications Technician at the Daimler plant in Düsseldorf. Wörwag provides fire departments with base and top coats. Team transports and fire engines are coated with Flame Red (RAL 3000).*

→ shop with new components. The walls are hollow to accommodate the elaborate wiring. Countless LEDs are supposed to immerse the imposing ancient Roman structure in special lighting effects. White? Yellow? Yellowish-white? The color is still being discussed.

930 trains on 8 miles (13 km) of track

In addition to the detail in the model buildings, 930 trains with a total of 10,000 cars add to the fascination. The total length of track amounts to over 8 miles (13 km). The system is operated by an observable control

The vehicles move as if by magic—and are even caught in real speed traps.

center with 76 monitors. Forty-six computers control the model train system. What's more, 10,000 cars are components of this immaculate setting, of which nearly 300 move on the roads as if by magic. They signal, obey traffic lights, overtake, accelerate, get caught in actual working speed traps, are stopped by the police, and drive back to the charging station when their batteries run low.

The computer calculates the status of each vehicle 20 times a second. Many move without a programmed destination. They have already traveled 869,919.7 miles (1.4 million



"Two colors, one combination—a service that everyone knows: the bright yellow and red colors on the DHL vans are unmistakable. All around the world."

SIEGFRIED HEIN, *Product Developer for Commercial Vehicle Base Coats*, likes Broom Yellow. Wörwag provides the base coat.



kilometers) that way. Small magnets at the steerable front axes steer the cars. They find their way via wiring that is embedded in the driving lanes. The vehicles display headlights, tail lights, blinking indicator and warning lights, brake lights, various emergency vehicle lights, front flashers, fog lights, interior lighting, and even flood lights.

The airport sets new technical standards

“One of our principles is to confront every technical challenge we come across, even if it seems hopeless at first,” explains Gerrit,

who created the miniature world jointly with his twin brother Frederik. “With that attitude we have found technical solutions again and again that amaze visitors.” That especially applies to the airport, their most demanding project so far. The “Hamburg Airport” emerged after six years and 150,000 hours of work. The highlight is the simulation of takeoffs and landings at one-minute intervals. On occasion an oversized bumblebee finagles its way between a Boeing 757-300 and an A380, which is one of the thoroughly charming touches the Hamburg model build-

ers added, even though it is sometimes deplored by other model builders.

Striving for perfection

One of the perfectionists is Jens Körner. He has been in charge of everything on wheels since 2003. “You need a certain amount of insanity in combination with enthusiasm for the job,” he opines. Many of the vehicles are created wholly by him and his colleagues. That includes the large number of street sweepers on the road in Rome. “We examined the traffic very closely on location. These →



“In the thick of the action. Our coatings are always there as well. Only the police decals bother me a little.”

IBRAHIM DADKHWAN, Water-Based Top Coat Production Master responsible for the series production color Arctic White. The police patrol cars and personnel carriers are coated with it. The lettering and decor are added later.

→ machines caught our eye,” according to Körner. Technical details like flash frequency or the shape of the brushes are as important as the colors and inscriptions. “Perfection is when you can get very close and have to think about whether it is genuine or a model.”

Days are 15 minutes long in Wunderland. It grows dark and gets light again with that frequency. The nights are animated by a twinkling backdrop of 335,000 LEDs. Ideal for spectacular activity. In the fictitious city of Knuffingen the fire department is called to an emergency every ten minutes, with up

The firebug plaguing Knuffingen can't be caught: the castle has been on fire more than 700,000 times.

to 34 vehicles responding. The fires are always reliably extinguished; only the arsonist escapes regularly. So Knuffingen Castle has caught on fire more than 700,000 times during its 16-year existence.

Additional countries are being planned

A number of details in Riomaggiore, such as balconies, clothes lines, furniture, curtains, and many painstakingly placed figures are still waiting for model builder Schmidt to complete them. After all, the visitors will be able to look into a lot of rooms later on. Vesuvius



“You can't ever get rid of earworms. Who doesn't remember the Aral gas stations commercial with the Fats Domino song 'I'm walkin'?”

MARIANNE VOLENTIR, Specialist Commercial Vehicles Basic Coatings, is responsible for the Aralblau (Aral blue) base coating at Wörwag. She herself has never run out of gas.

is being built in the next room. Constructed from kinetic sand (which doesn't dry out), and equipped with suitable atmospheric lighting and sound effects, the volcano is set to erupt and send dramatic streams of lava into the valley when finished. There's no doubt: Schmidt and his co-workers will not run out of work any time soon. The France, England, and Australia sections are in late-stage planning or already under construction. The universal model building motto applies in Hamburg as well: the tinkering is the main thing. That's why the system can't ever be completed. Ever. ■



Portraits: Boris Schmalenberger

Great fun on the mini-earth

The Miniatur Wunderland, which opened in Hamburg's Speicherstadt in 2001, is the largest model train exhibit in the world. Visitors meander through 1.68 acres (6,800 sqm) featuring replicas of central Germany, Bavaria, Hamburg, Austria, Switzerland, the US, Italy, and Scandinavia. The exhibit is open daily from 9:30 a.m. to at least 6 p.m. The hours are expanded on selected days, weekends, and during vacation periods.

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Wunderland up close: the love of detail is not only present in the individual models like the Elbphilharmonie (above), but also in the technical features of the system.