



Ancillary F1 – Series 1 Omnibus

This is the omnibus edition of Ancillary F1. The seven short shows that make up this mini series were originally released over seven consecutive days, but I've bundled them up together for easy listening. Let's get started.

Ancillary F1 - Bridgestone

Welcome to the first episode of the Sidepodcast mini-series: Ancillary F1. This series aims to look a little bit closer at the companies involved in Formula 1, the names you might hear around the paddock, but that aren't directly competing. Today we're looking at Bridgestone.

Bridgestone's origins began, believe it or not, as a footwear company. Shojiro and Tokujiro Ishibashi started putting rubber soles on shoes back in the 1920s and they soon worked their way up to rubber tyres. The name comes from the English translation of Ishibashi – which means stone bridge. They reversed it, and the company flourished.

Despite the war, Bridgestone survived, and in 1950 they made a deal with Goodyear to once more enter the tyre industry. In the 70s, the automotive industry went through a massive boom, and by the 80s, Bridgestone was becoming a worldwide brand. Towards the end of the 80s, they bought out Firestone, who were already running tyres in Formula 1.

Bridgestone were dominating the karting industry, and expanding into Formula 2 and F3000. With the Firestone acquisition they had the connections but the money wasn't there. Finally, in 1996, Bridgestone joined forces with the Arrows F1 team, and started winning over other competitors. Goodyear left the sport in 1998, which left Bridgestone as the sole tyre supplier. Michelin joined the fun in 2001, but just five years later, they left again, meaning F1 is once again supplied only by Bridgestone.

F1 tyres are made near Tokyo, where they are designed and tested, analysed and refined. There are many different materials that go into the makeup of a tyre, rubber, obviously, but also, oil, carbon, and steel. Approximately 60,000 tyres are produced each year and they go on an incredible journey from the moment they are made. Upon leaving the factory, the tyres are given an FIA barcode, and a number which makes each one individually identifiable. That way they can be tracked and allocated correctly to the teams. For European races, the tyres are shipped to Bridgestone's racing base at Langley, in the UK, before being transported to the Grand Prix destinations.

Bridgestone control the fitting of the tyres to the team-supplied rims, and have to start the process on the Wednesday before a race weekend. The defending championship team gets first priority, and so on down the previous years finishing order. The tyres are delivered to the teams, and monitored throughout use. If a tyre fails during a session, either from a puncture or otherwise, they are quick to collect the tyre from the team, wrap it, and take it away for analysis. This can be done initially at the track, but the defective tyre will most likely be sent back to Langley, and in extreme cases, to Japan.

As a race weekend progresses, Bridgestone stockpile up the used tyres and return them to the UK base. These can be used for analysis purposes and many are recycled.

For the future, Bridgestone have been developing the slick tyres that return to F1 in 2009. We've also recently found that they will be seriously investigating the possibility of a single wet tyre, to cover all wet conditions, rather than the two specifications that are currently used. Whatever direction the sport goes in for the future, it looks like Bridgestone are here to stay.



That's it for this first episode of Ancillary F1. I'd love to hear your feedback on this show, and what you think about Bridgestone. You can call our voicemail on 0121 28 87225, leave a comment on the blog or email me Christine @ sidepodcast.com. I will be back tomorrow with another episode and another company.

Ancillary F1 – McLaren Electronic Systems

This is Ancillary F1, a mini series brought to you by Sidepodcast, focusing on those companies that contribute to the sport, but don't compete for the title. Yesterday we looked at tyre manufacturer Bridgestone, and today we'll be taking a look at McLaren Electronic Systems.

The McLaren Group of Companies includes McLaren Racing, McLaren Cars and McLaren Electronic Systems. The Group started out as Ron Dennis expanded his Formula 1 team to encompass more and more activities. Dennis is the Chairman and CEO of the company, while Martin Whitmarsh is the COO.

McLaren Racing is obviously known for its Formula 1 success, McLaren cars are an elite and popular road sports car, but we need to look at McLaren Electronic Systems.

The official blurb of the company says: "It is a leading exponent of the group's technical prowess and design philosophy. Its goal is to provide the automotive electronics customer with a complete range of products which are reliable, yet at the very limits of technology." That's as clear as mud, obviously.

What the company does, then, is provide the high tech stuff. Although not limited to Formula 1, they also provide for the aerospace, marine and medical industries as well as home entertainment systems for you and I. However, F1 is the bit we're interested in, and McLaren Electronics supply many useful bits of technology, including:

- Sensors, for tyre pressures, temperature and speed.
- Refuelling regulators.
- Trackside telemetry, for lap analysis, graphs and charts.
- System monitors, for car setup, tuning, and configuration.

In 2008, McLaren Electronics were handed the contract to supply the standard ECU to all teams. This immediately caused controversy, of course, as McLaren Racing were perceived to perhaps gain an advantage from the close association.

McLaren Electronics have teamed up with the Microsoft Corporation to develop the system, and they manufacture the units for every team on the grid. An ECU is designed to monitor the powertrain, gather data, and send it back to the garages in real time. With up-to-date information to hand all the time, the idea is for strategy decisions to be made quicker, setup and tuning to be verified and data to be compared from current and previous laps.

However, the McLaren Standard ECU is thought to be at least 50 % less powerful with barely any of the memory of its predecessors. It was actually designed to be a lesser model than the previous ECUs due to the ever-present desire to cut costs. The current ECU took a lot of getting used to for teams and drivers alike, as the unit was well over 30% heavier, and allowed for engine braking and traction control to be banned.

There are rumours that the ECU can also be used to override the control of the cars in the future, particularly in terms of a safety car period. With the safety car rules under review, one option appears to be allowing the ECU to reduce car speeds in case of an incident, and thus increase safety.



Whether this will come to pass very much depends on the other teams. They cannot be happy with one team having greater access to the group that makes the ECU, even if there have been no incidents as yet. Meanwhile, McLaren are confident that the company is separate enough for it not to be an issue.

That's it for this episode of Ancillary F1. I'd love your feedback on this series and the standard ECU. Leave your thoughts on the voicemail 0121 28 87225, or at sidepodcast.com. Join me again tomorrow for our next look at an ancillary company.

Ancillary F1 – Tilke Engineering

This is Sidepodcast's mini series – Ancillary F1. We're talking about the companies that are around the grid, supporting the teams, but not getting much of the glory. We've looked at Bridgestone, and McLaren Electronic Systems, and today it's the turn of Tilke Engineering.

Hermann Tilke trained as an architect and engineer, but was a racer before he decided to start designing tracks. He competed in touring cars, and endurance racing, mostly on the Nurburgring circuit. As the resident expert on that particular course, after he set up Tilke Engineering in 1984, the organisers turned to him to provide a new access road at the circuit.

The first big racing track job Tilke Engineering undertook was in the mid-90s, and the task was to shorten the Austrian Osterreicherung into the safer A1-Ring. The changes were clearly a success in the eyes of Bernie Ecclestone, as the design of the brand new Malaysia circuit in 1999 was entrusted to Tilke Engineering. Since then, every new Formula 1 track has been designed by the company and many more historical layouts have been touched by the hand of Tilke.

Revisions made to existing circuits include lengthening Fuji, neutering Hockenheim, and fiddling with his old favourite, the Nurburgring.

Hermann Tilke himself doesn't just design the track and hand it over to the company's 130 architects and engineers. He gets involved at every opportunity, from initially selecting the area, to deciding what buildings will be nearby, and of course, designing the entire infrastructure that will have to cope with a Grand Prix weekend. When that special moment comes, the first race at a new circuit, Tilke likes to be there, along with those colleagues that were involved. He says that they know the track inside out, whereas the locals may still need a bit of guidance.

Despite being Ecclestone's go-to guy for track designs, Tilke Engineering has come under fire for producing boring races. Bahrain and Valencia are the first tracks that spring to mind, both benefiting from the traditional Tilke style of long straights and sharp corners, but with very little to distinguish them. Turkey could be considered a successful circuit design, but even that has just the one Turn 8 super-corner and the rest pales into obscurity. Despite this, Tilke himself says that he tries to add flavours of the local culture, for example in China, some of the grandstands have roofs that commemorate the traditional Chinese lotus leaf.

Regardless, the future of Formula 1 looks to be Tilke shaped, with Abu Dhabi, Cape Town, and Korea all signed up to receive the Hermann hand of engineering. The plans for a revamped Donington Park also bear a familiar insignia. Many fans are saddened by the lack of circuits that are formed through more natural processes than a man and his Bulldozer. Silverstone came to being on an old airfield and features some of the more memorable corners on the calendar. With so many new Tilkedromes signed up for future calendars, it seems inevitable that we will lose some of the original, and some might say best, racetracks. Ecclestone clearly isn't a sentimental person.

That's it for this edition of Ancillary F1. Don't forget to leave your thoughts on Sidepodcast.com, whether about this series or about Tilke and his designs. I'll be back tomorrow with another Ancillary company.



Ancillary F1 – McLaren Support Vehicles

Welcome to the Sidepodcast mini-series Ancillary F1. This series is all about the companies the sport couldn't live without, but who get none of the glory. Today, though, we're looking at a company who do provide a car and sometimes take part in races.

Mercedes Benz have been providing the Official Safety Car to Formula 1 since 1996, along with the Official F1 Medical Car. The Safety Cars services are called upon when weather conditions, or an accident, mean that drivers shouldn't be running at full speed. Since 2000, Bernd Mayländer has been the man behind the wheel of the safety car, with a co-pilot by his side. The pair are in constant contact with race director Charlie Whiting, to determine when the car is needed and when it should pull aside.

Since 1978, and Ronnie Petersen's fatal accident, the medical car has been dispatched behind the grid on the first lap of the race. The first is notoriously the most incident prone lap, so it makes sense for medical attention to be as close as possible. At the end of the first lap, the medical team pull into the pit lane, ready for any further call to action. There are four personnel manning the medical car, Dr Jacques Tropenat, Dr Gary Hartstein, and two assistants.

The two cars make their first appearance of a race weekend on the Thursday, when they test out the track, the cars, the television cameras and live timing system. Mayländer admits that he and Tropenat will often turn it into a bit of a race between themselves, not just for fun, but to make sure they've got what it takes to keep the speeds up. The only exception to the rule is Monaco, where Free Practice is on Thursday, so the safety car test is on Wednesday. With mainstream traffic running through the streets that day, the two can only race as fast as rush hour will let them.

In 2008, the cars were revealed as versions of top of the range Mercedes stock – an SL 63 AMG for the Safety Car and C63 AMG Estate for the Medical Car. I say versions of, because there have to be adjustments made for the cars to be suitable for Formula 1 running.

The AMG development team have Formula 1 specialists who develop, produce and service the vehicles, and make adjustments to the original models. Four cars need to be modified, two as backup. Such changes may include larger cooling ducts, weight reduction, and of course, higher top speed. The Safety Car, in particular, needs to go fast enough to prevent the Formula 1 technology behind from overheating. Both cars have video monitors, radios, and safety lights. The cars can get to 60 in about 4.5 seconds, and reach a top speed of just under 250 kilometres per hour. This compares with an F1 car that can reach over 300 on the long straights. Mayländer says that he is driving at 99% the limit of the car at all times, with that extra 1% there just in case the F1 cars behind push him. Drivers know that he's in a slower car, but they always want to go as fast as they can.

Of course, it's not just a question of speed. At the Japanese Grand Prix in 2007, the safety car ran for 19 laps, and no one knew when or if it would run out of fuel. Of course, with two cars available, it's assumed one could just take the others place, but how would the transition work and how long could they keep that up for?

Given the present F1 rules, the appearance of the safety car always brings about consternation. Current regulations regarding pitting under the safety car are making some strategic decisions redundant and some would go so far as to call it a farce. The regulations are being looked at, examined, and hopefully changed at some point in the future, but there's no doubt that the safety car will be here for years to come.

That's it for this episode of Ancillary F1. Join me tomorrow for another instalment of this mini series, and don't forget to leave your feedback on sidepodcast.com, or on the voicemail 0121 28 87225.



Ancillary F1 – Météo-France

Welcome to the Sidepodcast Mini Series Ancillary F1. Already this series we've had a look at Bridgestone, Mercedes and Tilke Engineering, and today it's the turn of another company who help the world of Formula 1 without ever taking home a trophy.

Météo-France is the official national meteorological service in France, and is the weather data supplier for Formula 1 teams. The organisation has been in existence since 1993, with headquarters in Paris, and funds most of its 300 million Euro budget with state grants, royalties, and commercial services.

One of those commercial services began in alliance with Toyota. In 1997, the team manager of Toyota was Ange Pasquali, and he brought Météo-France on board to provide weather information for Le Mans. The company soon progressed onto Formula 1.

Eight of the teams currently contribute towards the cost of the weather service, although when the FIA discussed a potential increase in the cost of Formula 1 entry fees recently, it was suggested that teams pay for the system in its entirety and estimated its annual cost at 485,000EUR per year.

Météo-France supply data to the FIA from a small unit within the circuit and measure the weather to internationally accepted standards. The information gathered isn't supposed to be used in regulatory matters, as that is the job of FOM supplied weather data, which can be found on page 3 of the pitlane timing screens. However, controversially both the Williams and BMW teams relied on the supplied information for their "cool-fuel" defense following the 2007 Brazilian Grand Prix.

The main problem for Météo-France is that the FOM supplied information and their own quite often disagree. Race Control can provide us with the standard "No rain expected in the next thirty minutes" messages, but, the service has a reputation for being a bit unreliable.

Some people within the paddock aren't happy with either system mind you. In 2006, Pat Symonds wasn't shy about mincing his words. When asked how useful the information was, he said: "Rubbish. Absolute rubbish. There is just nothing here. We don't subscribe to the Météo-France system, because we normally bring our own weathermen." But then talking of the FOM supplied system, in October of 2007, Pat said "The equipment that is used to display the temperature on page 3 of the timing screens is very, very old. It's not cared for, it's not been calibrated for years."

In addition to turning up to races, the French weather provider is also on hand at the Paul Ricard High Tech Test Track. The nearby airport has been using the services for some time and in the summer of 2007 the HTTT's Intranet system was upgraded to supply teams with essential weather information.

This gives us a good example of what Météo-France can do when they get it right. Paul Ricard gets a four-day forecast which is updated every few hours, and is constantly rolling forward. There's also a seven day forecast covering a much wider area. If the weather looks like it's getting serious, Météo-France can issue the circuit with various warnings and red alerts. The intranet side of things also boasts some radar images, to allow officials at the circuit to make their own mind up about conditions.

In real life, no one ever believes what the weather man says, but when it comes to Formula 1, getting accurate information is vital to race strategy and ultimately results. Whilst we might complain about Météo-France, FOM and their weather systems, the question is, could anyone do it better?

That's it for this show. I'd love to hear your feedback about the weather information supplied during races, leave your thoughts on 0121 28 87225 or at Sidepodcast.com. See you tomorrow for another ancillary company.



Ancillary F1 – Philips Lighting

Welcome to Ancillary F1, the mini series from Sidepodcast that takes a closer look at supporting companies, those that are involved in the sport but not directly competing. Today we're looking at Philips Lighting.

This year saw the introduction of Formula 1's first ever night race, and Philips Lighting got the chance to illuminate the event. The company has great experience in brightening up sporting events, with their first foray into stadium floodlights about 60 years ago. Philips, based in the Netherlands, but a multinational corporation, are involved in all aspects of technology, including healthcare, electronics and as we now know, lighting. The company already has some involvement in Formula 1, as Philips Shavers are a prominent sponsor of the Williams team. They have recently announced an expansion of the sponsorship, meaning the entire Consumer Lifestyle section will be on board, their name will appear on the teams clothing, and they'll have promotional rights with Rosberg and Nakajima. However, the company has more to offer the sport than money alone and thus Philips Lighting took the next step.

For the Singapore race, the company supplied almost 1,500 lighting projectors, a brand new concept, specially designed and produced to reduce glare and be super bright. They lit the entire 5 kilometres of track and the pitlane. Philips wouldn't let slip how much the project cost but the CEO would only say it was "some millions." The manufacturer also supplied the corporate boxes in Singapore with massive flat-screen televisions, but that's just showing off.

The Singapore race organisers appointed Valerio Maioli as official consultants regarding the lighting, and the Italian company partnered with Philips to design the new projector, a custom-made solution to tackle the unique problem of Formula 1 night racing. Maioli also wouldn't comment on how much it cost to bring Philips on board, but said theirs was a competitive tender. One of the other advantages Philips projectors had over their rivals was a solution that was 16% more energy efficient.

That's pretty surprising, actually, because the new lights are a long way from Philips first stadium job half a century ago. These lamps are four times brighter than a normal football stadium, not for the drivers, as you might expect, but for the High Definition television camera's. An F1 driver doesn't need bright, he just needs consistent lighting, so the 3,000 lux provided by these projectors was for those TV viewers lucky enough to receive race broadcasts in HD. In comparison, a football stadium is about 800 lux, and your regular street light is about 30.

The lighting system took just a few months to put in place, once developed, and lined only one side of the track. Projectors were raised 10 metres above the ground and spaced 4 metres apart. Any pre-race fears about backup generators failing remain unfounded.

That's it for this penultimate ancillary company. Please leave your feedback on Sidepodcast.com or the voicemail at 0121 28 87225. I'll be back tomorrow with the last episode for this series.

Ancillary F1 – RTV

Welcome to the last episode in the mini series Ancillary F1, where we take a look at the supportive companies involved with the sport, those not directly competing. Today we're looking at television production house RTV.

RTV GmbH was founded in 1995 by Oliver Bauss in Stuttgart. He had been working for the German TV company RTL, who had the F1 rights at the time, and Bauss was a motorsport fan in his own right. With an interest in racing, he soon realised there was a gap in the market for behind the scenes broadcast footage, and he setup RTV.

The company's first partner was Allianz, who sponsor Williams, and their first commission was to produce a series of programmes about how F1 has helped to improve passenger safety in road cars.



Their clientele, and capabilities improved over the years and now they broadcast a wide range of Formula 1 related packages. They are probably best known for Inside Grand Prix, which is a half hour programme, covering technical information, historical pieces, behind the scenes footage and personnel profiles. The programme has been running since 2001 and is currently broadcast in 55 countries across the world.

There's a lot more to RTV than a thirty minute television show though. No doubt you've seen those promotional films that teams make when they're launching a new car or driver lineup. It usually involves a lot of chasing around a track, and can include slow motion and close ups and other special effects. RTV make a lot of these, and have invested heavily in the equipment to do this. They have access to specialist helicopters for overhead shots, tracking vehicles for smooth filming, customised rigs for those hard to reach places and super-slow-mo cameras for... super-slo-mo filming. RTV plan the entire production, from storyboarding, through video capture and the editorial process, and the end results can be stunning.

One of the most interesting things RTV can offer is what is known as the bullet-time effect, or as you and I know it - that cool thing they did in The Matrix. A long line of photographic cameras, over 30 sometimes, capture images within split seconds of each other, and the resulting pictures can be used to capture many angles of the same shot enabling a director to pan around a seemingly frozen image.

The company use their many talents to cover press-conferences, car launches, testing, breaking news, sponsor films, as well as branching out to other series like DTM and Le Mans. The reason we like them so much is for their forward looking internet presence. Rights free material in various formats, and multiple languages, covering different motorsports and topics, available to download. This is something Bernie Ecclestone could only dream about.

That's it for this episode and this series. I'd love to know if you've seen any of RTV's coverage and what you think of it, please leave your comments on Sidepodcast.com, or on the voicemail 0121 28 87225. Look forward to hearing from you.