

* In the same book, I presented another twinning way to create a Twin-Mustang: instead of the classical lateral junction (XP-82, Bf 109Z), it is possible to choose back and forth junction (like the old Fokker M9 = Twin M8, or the recent Schweizer SA 2-38 = Twin 2-37). This produced the push-pull P-51P. It was also possible to twin 2 half-XP-82s, into a **XP-82'**.

* Mixing both twinning-ways, I created a 4-engined quadruple plane : **P-51X-4** (see on the cover of this book). Then I imagined to replace the Allison V-1710 engines (12 cylinders, 1,500hp) of some P-51s by the doubles V-3420 (24 cylinders, 3,000 hp), and that would be an 8-engined Mustang somehow: **P-51X-8**... I moved the central pod ahead and brought the lateral fuselages closer, as there were no more risk of intermeshing propellers.

* Further into madness, I doubled the X-8 back and forth, producing a tandem-wing Mustang with 16 engines : P-51X-16... Twin-(Twin-(Twin-(Twin-Mustang)))... The dream could go on endlessly, and I have stopped here with the **P-51X-24**, with 6 cockpits and 3 sets of wings, triplex-X-8... 24 engines on a single plane is not impossible, as the Bréguet 1000t had been designed with 120 engines.

* After inventing the P-51P, I discovered that the modeller TSR-Joe had made long before me – and at the age of only 15 – a drawing of such a push-pull twin-boom Mustang. Without any relation to twinning, this one would have used a more classical canopy, without crew facing back and forth. Talking about it, we decided together to call it North American/Cherrie **P.51PP**, and he suggested a single-engine pusher derivative with a free nose (SAAB J.21-like): **P.51Psh**.

* For the *Virtual Mustangs* book, I had already drawn two J.21/P-51 mixed profiles, hybrid: the J-51B-21 MustAB and **J-51D-21**. The same had been done with a XP-54 Swoose Goose: **XP-51D-54 Mustoose**. I had also made an intermediate between the P-51 Mustang (central cockpit) and P-82 Twin-Mustang (lateral engines and tail-booms): the P-38-Lightning-like **XP-51D-38 Musting**.

* Then, the modeller Toad told me of his project to include a Mustang (1/48th) canopy on his (1/72nd) model of P-61 Black Widow. In the gallery of profiles to illustrate this and more, I included on a XP-61E basis (or F-15 Reporter) Twin-Mustang-like engines, fins and scoops, and Toad agreed. The Northrop-NorthAmerican/Pomerleau-Meunier **F-151D Mustorter** was born...

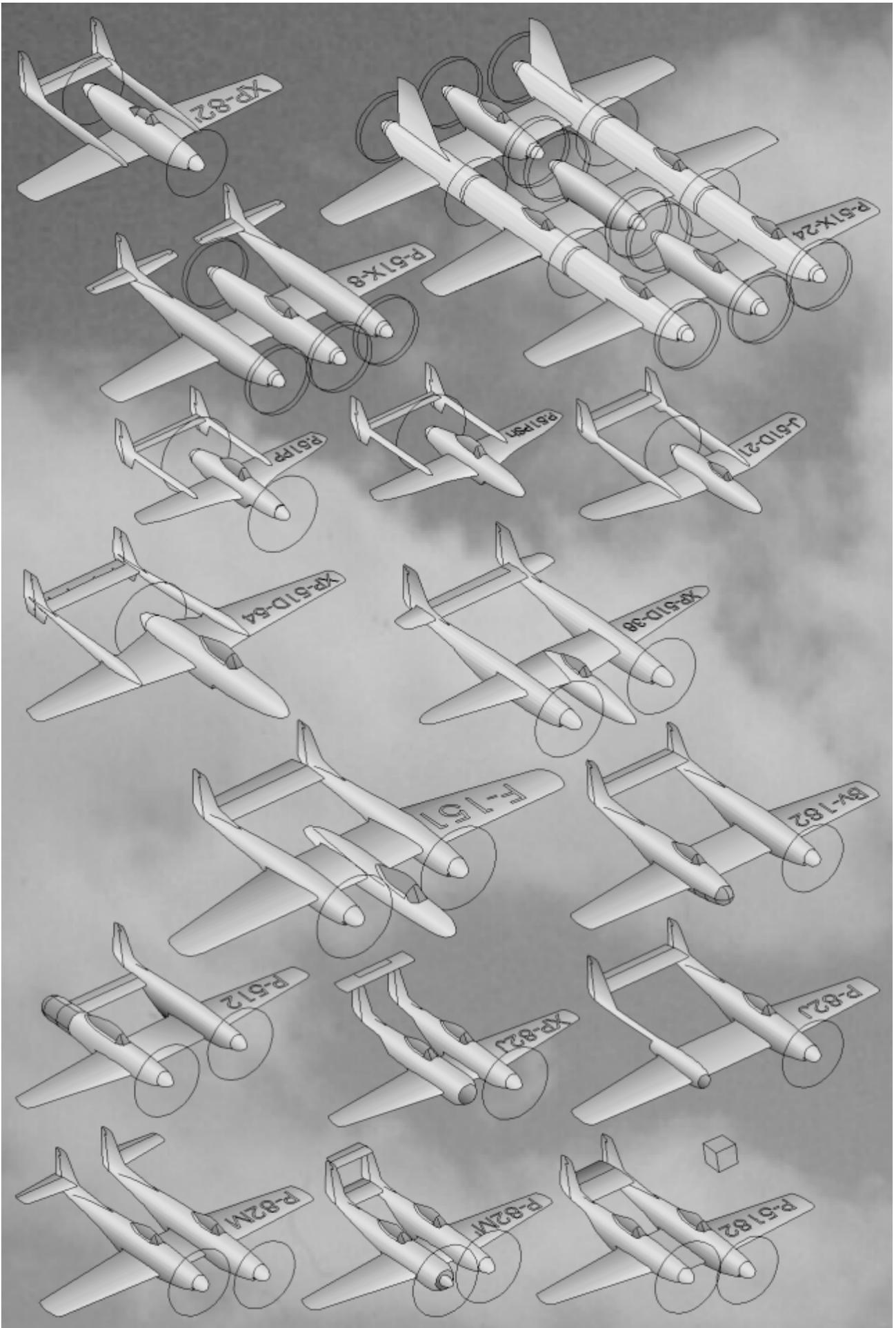
* After that, TSR-Joe suggested to add some asymmetric Mustangs to the book *Virtual Mustangs*. I had already invented one inspired by the Bv 141 but why not creating *twin-fuselage* asymmetric Mustangs ? From a standard XP-82, I replaced one engine by a glazed nose, creating the **Bv-182**...

* In the opposite direction, we could keep the 2 nose-engines while replacing one tail by a rear panoramic canopy, that could be useful. I started from a long-canopy XP-51J, twinned laterally, with moving forward the tailplane joining both fuselages (the starboard one being metallic on the internal side): the result is the **P-512**.

* Additional asymmetric twin-boom Mustangs: the **XP-82J** and **P-82J** would be composites with piston engine + jet like the Miles M.58. Though, the XP-82J would have been absurd, with the starboard pilot lacking room for his legs above the jet engine, and on the P-82J: thrust asymmetry would have been very uneasy to handle.

* On the contrary, an asymmetry could have been decided to improve reliability and save pilot lives: having on a standard XP-82 the move forward of the port fuselage considered for the modern Harkey Twin-Mustang racer. This provided us with the **P-82M (Moved)**, safer Twin-Mustang having less asymmetry if one engine fails. This might have been seriously proposed in parallel to the Twin-Mustang project, even if the archive explorers have not found such idea yet. The only drawback would have been balance, but the solution was easy: not move the port engine (and pilot) ahead, just the propeller, with a longer shaft, or else: choose one very short engine, radial (**P-82M'**).

* A different one would have been the **P-5182**, mixing a P-51 and a half-P-82 ($1+[\frac{1}{2}\times 2]=1+1=2$ fuselages)! I drew it with aligned tails to have canopies well separated on a side-view, even if the asymmetric wings (port forward, starboard aft) would have created an awful balance...



* Then the modeller engineer CatEagle73 imagined a P-82 with the central glazed pod of the preliminary Bf 109Z, and I drew it as Messerschmitt/Mayerle **Bf-182Z**. But the lateral view was awful, and a version with lateral pods would have been far better: **Me-182Z**. Like the Bf 109Z with pod, this one used no bubble canopy, and featured tandem seats, separated tailplanes.

* Other invention in the same book: P-51Vs with butterfly tail. I doubled that in a P-82W, similar to the Fouga Gémeaux CM-88R (double Cyclope CM-8R), but the profile was not very changed. I added a pusher engine on the centreline, and front cockpit, creating the **P-82WPP**.

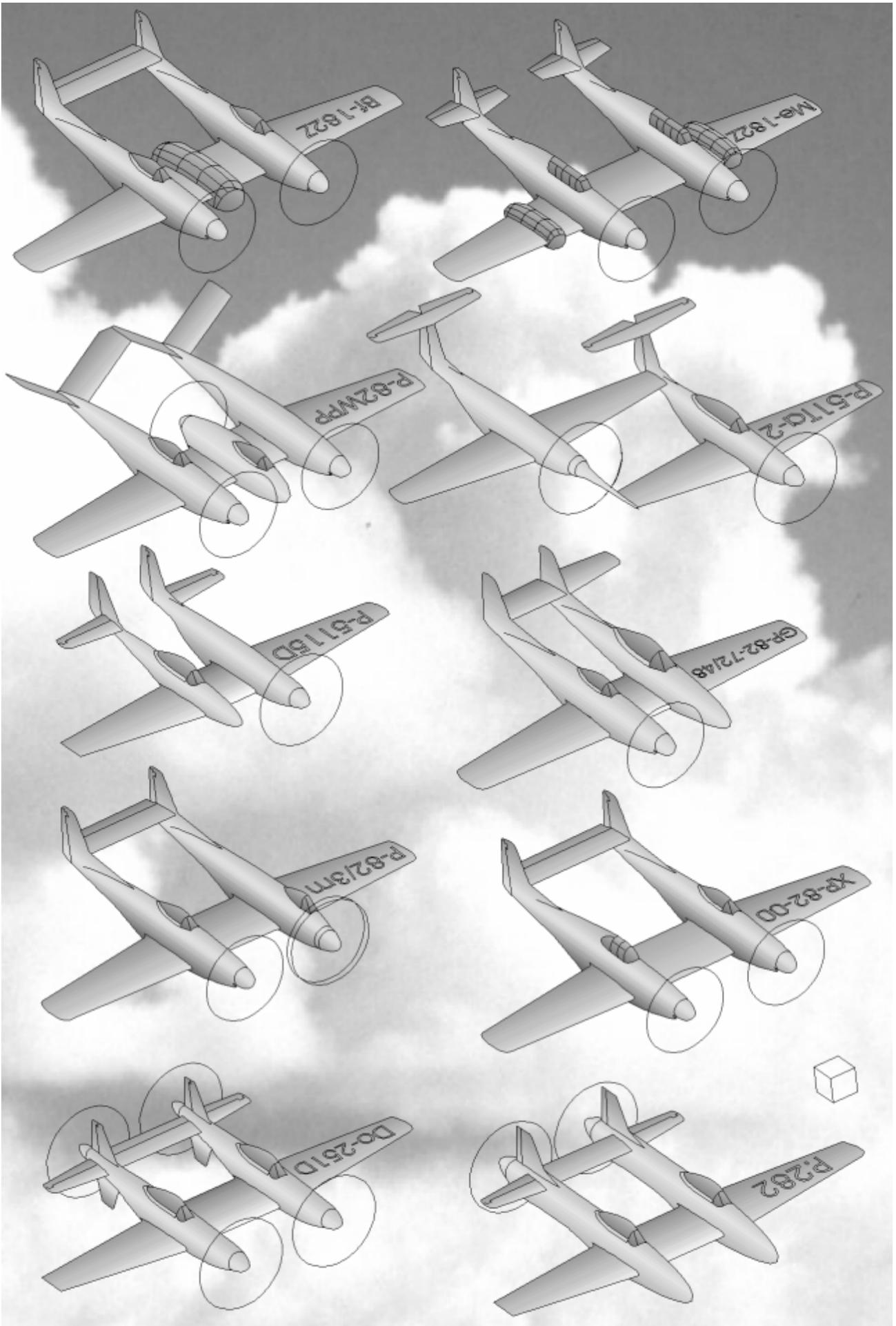
* The real project Trebble-Trouble P-51 was also interesting: one central P-51 and 2 others, pilotless, joined at wingtips, to be jettisoned. With just one, this triplex-boom becomes twin-boom: **P-51T-2** (see the cover of this book)... A more original double, with improved view, would be the asymmetric double **P-51Ta-2**.

* I have drawn also a P-51 with improved aesthetics, being slim with no more nose-engine and nose-scoop, and with reduced fuselage height. This made a Mustang glider, at first, but it was also pleasant to (have an engine somewhere and) build a twin-fuselage single-engined asymmetric model (**P-5115D**). The same half-glider layout was used on a P-82 basis, with a 1/48th canopy on the port fuselage of a 1/72nd model: **GP-82-72/48** (a normal P-82 with 1/48th canopies on 1/72nd basis was the **P-82S** introduced on the cover).

* I added also a Twin-Mustang with central engines like the OI-2 seen previously, simply doubling the Rolls-Royce FTB (Airacobra-like Mustang) and lengthening the rear fuselage as it was done between Mustang and Twin-Mustang. Discarding nose engines to have most of the weight above the centre of gravity would have improved a lot the manoeuvrability of such P-82. In the long P-82 fuselages, it was also easy to install coupled engines: this made the 4-engined **P-82/4m** (*motors*) featured on the cover of this book. Maybe the code '4e' (*engines*) would be more appropriate, but I wrote it in French (*moteurs*) and the German Ju 52/3m (*Motoren*) remains the reference for a code mentioning the number of engines... Then I mixed the P-51J and FTB into an asymmetric derivative: P-51JTB. There would have been one nose engine and one central engine, the *goal* being to have the best view forward for the main pilot, and no shaft (complicated, fragile, heavy) for at least one engine... Seeing this composite as a mix of half a XP-82 and half a P-82/4m, this would be the 3-engined **P-82/3m**, with unchanged lines.

* Other invention: the **P-82-00** (on the cover, once again) would have been a Twin-Mustang drawn at the earliest step of the Mustang story: from the project NA-73-00, long before the P-51F/G/H doubled in *Forked Ghosts* and even before the very first Mustang prototype: NA-73X... And the drag would have been reduced (just like the P-51C was more speedy than the P-51D, while the D was preferred by pilots for its improved all-around visibility). Though, I understand that such reason is not good enough to build different canopies, with higher manufacturing costs and 2 stocks of parts to keep available for the users. So this was doomed, but pleasant enough in my What-if gallery, far from Reality. Here, besides: a half P-82-00 has been linked to a half XP-82, into the **XP-82-00**: the main pilot get all-around view while the overall performance is a little better, it seems almost wise, or it may have been proposed, then rejected, simply, as a project not to be built...

* By twinning freaks from my *Virtual Mustangs* book, I could propose maybe 100 additional Twin-Mustangs, but this would not add much to the originality of the gallery, it is just automatic producing and every reader could imagine without help. I will just present here a 4-engined Do-635-like Twin-Do-51D": the push-pull **Do-251D**. Also with ejector seat but only pusher, my P.51d Mustund-Voss (inspired by the Blohm-und-Voss P.208) can be turned into a **Twin P.282** just as well.



* Other big family deserving enrichment : the first De Havilland Vampires. The modeller Toad had imagined long ago a piston forefather of this famous jet, push-pull (on the Internet nice forum <http://www.whatifmodelers.com/>). The chosen name has been **CCF.100/M2** for this Canadian Car & Foundry/Pomerleau derivative of the DH.100 using 2 Merlin engines.

* Discussing about this one, the modeller Jeffry Fontaine added that a Vampire with a nose radial engine can be imagined from the Focke-Wulf Fw 281 Peterle (this one using a turbo-propeller). So this brought to life a **DH.281**... I have discarded the lateral air intakes as the front cowling could provide air for the jet after cooling the radial, maybe with the help of a ventral scoop. Like the Miles M.58, this twin-engine aircraft would have been perfect for long economic cruise before a dash at high speed.

* Independently, I heard about a DH.99 twin-boom forefather of the Vampire, and imagined a true propeller-driven twin-boomer (**DH.99P**) whose layout would have been used again for the later jet DH.100... but this was wrong : the DH.99 code was used for the E6/41 jet project itself (see in *Forked Ghosts*), before it was changed into DH.100. The Jetcraft Jet Cruiser Mk II has been an actual project for a Vampire with a pusher airscrew, but this happened in the 70s, using a turbo-propeller. I add the dream of a two-cockpit twin-propeller asymmetric **DH.99B**, as illustrated on my fantasy site http://cmeunier.chez.tiscali.fr/asym_dahu_aeroUK.htm and a **DH.99½** double plane mixing propeller-driven 99 and jet 100. [A Twin-Vampire with 2 jets could be similar or rather different, see the **DH.100T**].

* To complete the family of asymmetric doubles from my fantasy list with a 1939-45 model, I may present a **Twin-ML**, still different...

* On this site, I also presented some crazy 4-engined push-pull twin-boomers with either a pod above (like on a Bratu project before 1939) or a pod aft. This is shown here on a **Harry** basis : **/4m** and **/2p**. The advantage would be: no asymmetry if one or several engine fails. And less drag than on the classical 4-engined (DC-4-like) layout with 5 big vortex sources.

* In *Supplement No.1*, I said that, alas, the Ju 88Z was not a twin-fuselage Zwilling but a single-fuselage Zerstoror, so I did not draw it. But the modeller artist D-ONUT argued that a double Ju 88 would have been a good heavy plane, and rather simple to manufacture. So I drew it at last. For the code, I checked how were called the real Ju 88Z, and the answer was Z-15 and Z-19 (for the V15 and V19 Ju 88 Zerstoror prototypes). Justo Miranda confirmed that the Ju 88Z-1 code has never been used. So here are the Junkers/Hancock **Ju 88Z-1** and **Z-1'** – I did not know the single-cockpit side and the number of engines precisely imagined by the dreamer. And I add an asymmetric simplified twin-engine of my own (**Ju-88Z-1'**)...

* As well, D-ONUT proposed that someone build a double He 177 model, 6-engined (3 doubles) with 2 cockpits (for very long flights with 2 pilots). The Heinkel 177 has also been tried in a Zerstoror (destroyer) role but the **He 177Z** code seems to remain unused. With more engine pods, Swamphen invented a **He 277Z**.

* A Twin **Yak-7Dv** has been imagined by Daryl Johnson (whose Mig-15 Twilling twin was too recent for this collection), and that would make a forefather for the Yak-15Dv... Besides, as the Yak-15 was a jet Yak-3, I can present an intermediate Yak-315, with a 3 port and 15 starboard.

* D-ONUT wanted to build a side-by-side twin-Wal scale model. As this Dornier flying boat appeared in 1922, it was far too old for this book, but the last derivative of the Wal was the Do 18, so I proposed a Dornier/Hancock **Do 18Z-2**, different from the Do 18Z in *Supplement No.1*.

* In the same way, the modeller Aircavpinkteam was dreaming of a twin A-1E Skyraider. As the A-1E first flight occurred in 1951, I used instead the first Skyraider (XBT2D-1) of 1943. And this brought to *life* the Douglas/Wearmouth **Sky-T-raider** of 1945... Later, a mysterious Boeing wing with 4 engines of B-29 was presented, and Jschnus said that such engines were rare on fighters, just the Skyraider being mentioned in the USAF museum, while 4 engines on such a plane would bring so much more power... and besides, not enough twin-planes and asymmetric planes have been studied for the USAF. This rich mixing of ideas leant to the **Sky-T²-raider**.

* Seeing the He 162Z model, Lyn Ludgate judged that separate tails would make this aircraft too fragile, without good reasons (the He 111Z needed separate tails because the extra central engine made the distance between fuselages rather huge) and with danger at the high speed of jet aircraft... So the He 162Z(-1) was turned into the improved **He 162Z-2**.

* I add here the **Twin-Tempest III** (Tw-Tp), imagined in the P.1037 affair.

* D-ONUT said that he has never appreciated the central pod shape of the P-38, most famous of all twin-boomers, and he wanted to put cockpits in the booms (like on my **TP-38R** derivative of the Recon P-38) and engines in the centre, making a Lockheed/Hancock **P-38 D-onut** push-pull...

* In *Supplement No.1*, I did regret that the 3-engined P-74 (P-38 + P-51 hybrid) has not been designed as a push-pull, but... if I want it, let me draw it... as a complementary **P-74B** design. Besides, a pusher-propeller on a P-38 may be chosen in a different way: using 2 coupled engines driving contra-rotating pusher propellers. Replacing the 2 lateral V-1710s by one central V-3420 (double 1710) produced this **P-74C**, that could have replaced the similar Vultee 78/84 (XP-54).

* The Kakuki/Kaksasie **P-38M2** would have been a Lightning with a rear post. This is different from the real 2-seater P-38M, and I add separate tail-planes to give a better view rearward, even if the source is just a profile, not featuring this detail.

* By the way, I understood lately that Ken Steacy's so nice P-38 pusher was a triplex-boom model rather than twin-boom, as the central pod held a fin. The slightly different **P-38P** is joining the advantage of rear fins to being a genuine twin-boomer...

* As the view forward on these pusher P-38s is bad, let us move the cockpit on the foreplane. This is using the principle of the Airspeed AS.31, with a pilot-pod on the tailplane, far away from the wing. I have called it **P-38 LS LightSpeed**, referring to AirSpeed. And without any reversing into a pusher, I propose an AS.31-like P-38 (**P-38-31**) answering a requirement for a 3-engined 2-seater with perfect view backward... To hold properly the cockpit weight, a tandem-wing would be more appropriate, like on the double **PP-3838** – justified by producing a 4-engine with available parts.

* Also on the What-if-modeller forum came an interesting line : Variable Geometry Lightning... Alas, it was not a P-38, just a Lightning-jet of the 60s... Anyway, it would have been possible in many directions: **P-38VG** with variable-sweep (Pyelyenbyerg-like), **P-38VG'** with variable-dihedral (Oceanplane-like), **P-38VG''** with variable-span & chord...

* Then the modeller Chris Narses2 said he was intending to build a Jet-P-38. That made Alvis Petrie look for The Squirt he remembered as being such a model. This one, seen earlier in this book, had too long pipes so I imagined the improved **P-38Jt**, asking for confirmation. C-FWOL answered that the fin size should be increased further, the tailplane raised up, the air-intakes circular, the internal wing using a constant chord and the external wing could be swept, backward or forward... That created the Lockheed/Lacombe **P-38JR-3**.

* Discussing with Deino, I also imagined a triplex-boom canard P-38, with elevators in front and tiny stabilisers aft (P-38DE), and I turned it into twin-boomers: asymmetric (**P-38DE-2**) or flying wing (**P-38DF**). New shapes greatly enriching the collection.

* Toad presented also on the What-if modeller site a peculiar Black Widow derivative : the De Havilland Canada **P-111 Rust Bucket**, that he drew when he was a kid, in 1981. This is far after the 1945 limit, but Toad confirmed that this aircraft with old Pratt & Whitney radial engines would fit right into his 1939-45 personal scenario. The first DHC aircraft, DHC-1 Chipmunk, is dated 1946 but this company existed since 1928 and a DHC design in 1945 is very possible. Here is presented a simplified sketch of this creation, as the original had details of shape adapted to gun turrets located everywhere, and this military way is different from my focus on shapes. Then, when other modellers tried to invent new versions and different users for the P-61 Black Widow, Toad suggested to create a twin-jet derivative. So, I imagined a XP-61E turned into a P-61EJ with Meteor engines...

* I also drew a Twin-Airacobra (**P-39T**) to illustrate the difference with the Tvin-Aerokobra OI-2. And as the length was shorter and the wing different on the double P-39, I made a Twin-Kingcobra (**P-63T**) to see – both were very different from the OI-2.

* Looking for the P.194 asymmetric plan on Igor Shestakov's web site (<http://www.unicraftmodels.com/>), I found an interesting other resin model of a plane designed by Blohm und Voss or Isacson, a push-pull called Zerstoror. Alas it was not a twin-boomer... till a few changes of mine, inspired by Igor's *improved* Bv141s. The main way was lengthening the lateral pod into a boom (**Zerstoror 241**). Here, this requires peculiar propellers included in the rear fuselage, but such a layout has been actually proposed at that time for the Bv P.192, BMW Jäger and Byelyayev 370. Second possibility: inventing an *hypothetical symmetric Zerstoror* derivative. It could be justified by improving the view for the passenger.

* Other peculiar creation came from a misunderstanding: in a Web forum devoted to Combat Flight Simulator, the webmaster (named Tubs) has spoken of a twin-boom XP-55, meaning actually XP-54 (the Vultee V84 famous twin-boomer), but a reader named TooCool reacted in a funny way: « What? The Curtiss XP-55 is not a twin-boomer at all! Do you speak of a double Curtiss XP-55? ». I asked for precision about this hypothesis, at: <http://cfsfrance.altajeux.com/cgi/ikonboard/topic.cgi?forum=27&topic=138>). Then another member – LaFayette - provided us with virtual CFS photographs of such a twin. And TooCool confirmed these lines with a plan of his own, rather than accepting my different ideas... Thus, 2 planes came from this nice exchange : the Curtiss/TooCool-Journé **XP-55Z**, and my **XP-55T**. The Z would have been rather easy to build but fragile... The T required an asymmetric move forward of the left fuselage, to avoid intermeshing propellers. Then, as the modeller I.M.W.F.O. invented a canard Twin-Super-Hornet, with 3 engines and external foreplanes, I adapted this way a **XP-55D**, with a push-pull originality.

* About such canard twin-boomers, I found an old drawing that I made then rejected for the initial book *Forked Ghosts*. The principle was to illustrate the definition problem of writers requiring booms to be aft of the wing, with no reason except habit. At last, I had discovered the real Gribovskiy G-17 to illustrate such a possibility, and forgot my fiction Gotha **Go 242X**. Now that I accept fancy aircraft related to those years as well as genuine true ones, this is different, and there is no reason to hide this creation anymore. Loading would have been very easy on such a canard cargo.

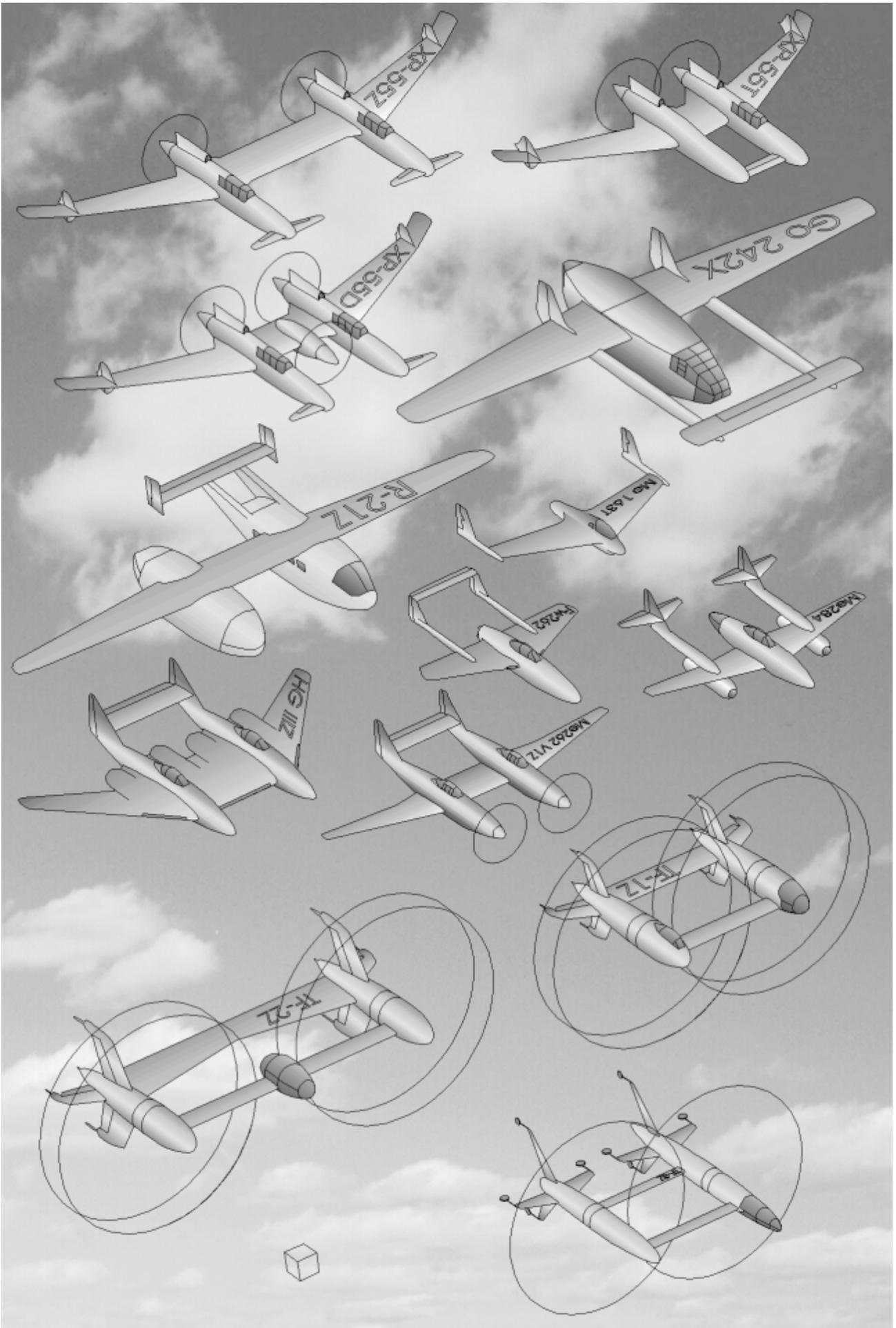
* Apart of Canard and Flying wing layouts, that provide a rear access without tail interference, just like the rear booms, there is of course the possibility of an asymmetric configuration : port tail and starboard cargo pod. I illustrate that with a twin-boom glider here, as a double Rubik **R-21Z**. In the same way, let us remember that the asymmetric layout (lateral or vertical) is an alternative to install push-pull engines, a pusher propeller, a rear post, etc. – free from tail holding (the *no-tail* flying-wing layout and the *tail-first* canard layout are not the only exotic alternatives).

* As the Me 163Z had illustrated a twin-fuselage plane without tailplane, we can show a twin-boom version : **Me 163T**, to complete the P-38DF.

* A nice misunderstanding occurred between what-if modellers: Lyn Ludgate presented a twin-boomer while speaking of a very special Me 262 built by Lee Bagnall, and I thought this was a Me 262 turned into a twin-boomer, without the usual twinning into Me 262Z. This was misreading: the twin-boomer was just a Focke-Wulf Flitzer while Lee's 262 was not a twin-boomer. But mixing a Fw 184 Flitzer and a Me 262 was very possible (Fw 262), and separate tails on a Me 262 would provide also a nice rear post (Me 284). To be complete, let us say that Lee's model was not a twin-boomer but a black gorgeous Me 262 HG III, and I include it here as a Zwilling HG IIIZ. Surprisingly, it seems too modern for a 1945 plane.

* And to have a full family, I add a double **V1Z** built with the 262 prototype as it was manufactured before installing the scheduled jets... For some readers, this Twin-262 Jumo sounds like a word game : Jumo could mean both Junkers Motor (JuMo, German) and Twin-brothers (Jumeaux, pronounced Jûmo, French)...

* Lyn Ludgate showed also her Triebflugel early-VTOL model, asking how to twin it. Requiring details, I got the direction to use a prone pilot (to stand upright on take-off & landing), like in the Hiller VXT-8 jet designed later. And I used the twin-body to house both a seated pilot and a prone pilot, for the different steps of a VTOL flight, good reason for twinning (**TF-1Z**)... But intermeshing rotating wings would be dangerous, and Nev advised me to draw it with more distant bodies and a central pod for the pilot: this created the Focke-Wulf/Dunn **TF-2Z**. With bigger fins to stabilise on the ground. Finally, Lyn told me that I have not exactly matched her idea and presented the drawing of the initial thought (**TF-3Z**): single-seater in prone position, no jets but fuselage engines and simple propellers; shaft and gears connection through one wing to keep symmetrical power if one engine fails; starboard propeller moved aft to avoid intermeshing propellers; lengthened fins without scale change. Better indeed...



* Seeing a Dornier 435 nice model of Martin Higgs, several what-if modellers made comments: The Wooksta suggested that someone scratch-build the rare Zwillling Do 635, so mixing both ways, I presented my Do 435Z (from *Forked Ghosts*). Then Toad suggested to replace on the composite 435 the remaining piston engine by a second jet, and the propeller by an air intake, so I turned my Zwillling too into a pure jet, with the name **Do 835A**.

* Though Toad/Captain Canada said the noses were not graceful enough and should look like Sabre ones. Moreover, he preferred the dorsal scoop of Martin's Do 435 version (Unicraft model kit). This produced the **Do 835B**. I do not know exactly where the front jet engines would be, and I have moved the wing backward very approximately. Toad then suggested to remove the dorsal air-intake, as the nose one would be enough, but I am not sure, seeing the example of the L-153-8 with twin axial jets fed by two scoops...

* As The Wooksta had been the very creator of the Ta 152Z in *Supplement No.1*, I created as a further answer in that topic a jet version **Ta 152TL-Z**.

* I made the same transformation to the Fw 190Z, becoming **Fw 190Z-TL**. As a matter of fact, I could have either twinned the real project Fw 190TL into a 190TL-Z. But its shape was not special enough... Of course short exhaust pipes are more efficient than long ones (and this is the main reason for the Vampire/Flitzer being twin-boomers), but here I have preferred a modified back protecting the tail from hot gas rather than just lateral pipes on the nose.

* It is very easy to turn also the radial-engined famous Twin-A6M1 into a jet: **A6M99**. This is an easy addition, but not beautiful alas.

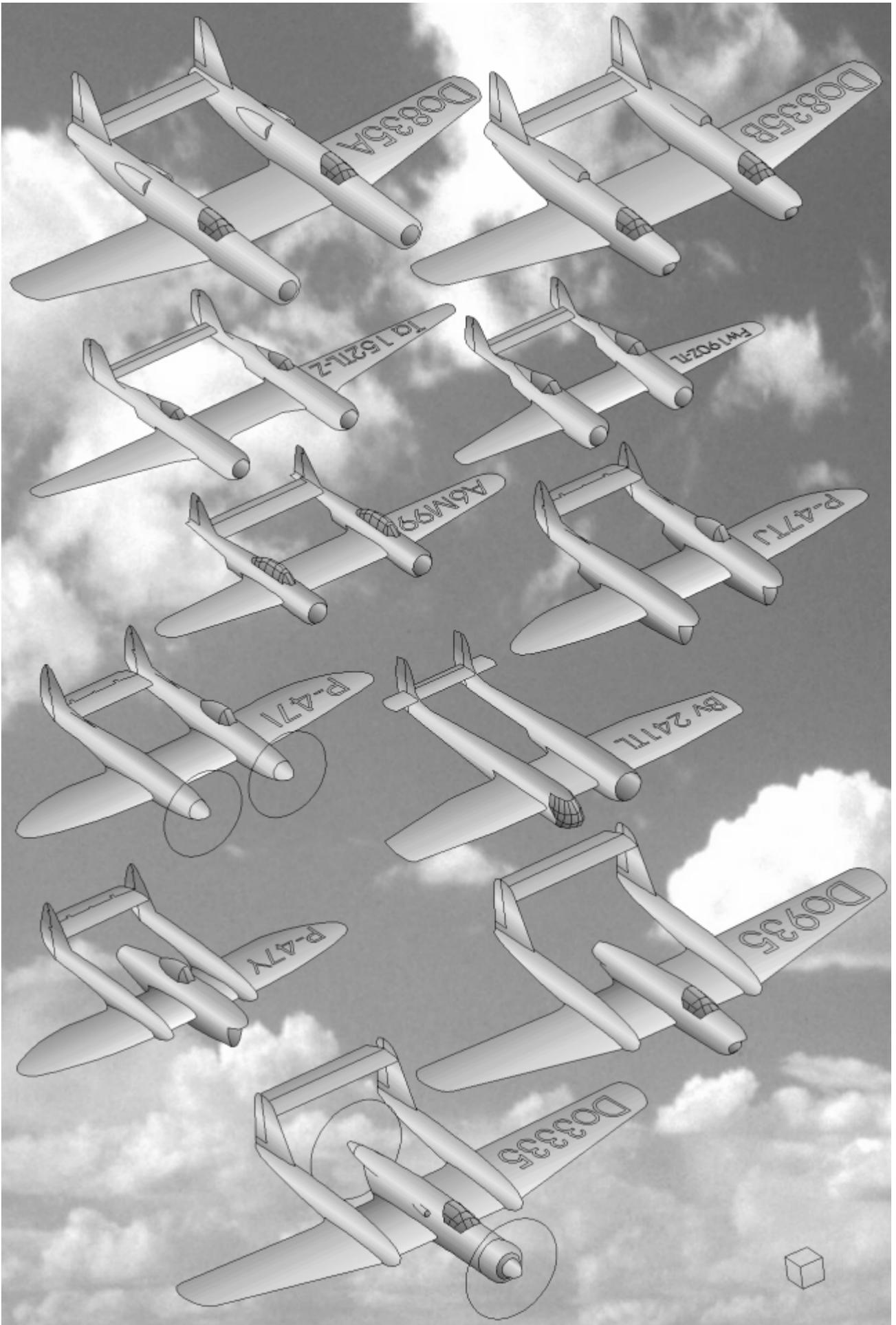
* I did the same for the P-47 Doublebolt but here the air-intake for the radial engine and supercharger was not circular, so I installed a round nose above the air-intake. I called this one **P-47TJ Jet-Bolt** as the Thunder-Jet name and XP-47J code already existed and the P-47T name would have been more appropriated for the simple twin (Double-Bolt or Twin-Thunder).

* With a round nose and raised-up back above the jet exhaust, I saw there the basis for a rather beautiful Thunderbolt, the *improved* **P-47 I** with *in-line* small engines. This is not completely stupid for a trainer, and maybe also for a high performance plane: with such better aerodynamics, less power is needed. This is even a positive circle: as a smaller engine is used, there is less drag and weight, so less power is needed so the engine can be reduced again, providing less drag and weight, etc...But this cannot tend to zero, as a glider is not the very best aircraft in speed, of course, I just wanted to refer to the opposite logic of Seversky/Republic development into P-41/43/44/47: for increased speed and acceleration, a more powerful engine is required, but it has more drag and weight, thus a need for even higher power, and the adequate engine has even more drag and weight, requiring more, etc (and more weight require more lift, so a bigger wing, so more drag and weight too...). Definitely, I do not like the raw power of the ugly radial engines, able to overcome their drag, but it is not simple from an engineer point of view, as the streamlined in-line piston engines were more heavy and fragile for the same power, as being liquid cooled.

* I have turned to jet a different twin-fuselage plane with radial engine: the asymmetric Bv 241, becoming **Bv 241TL** with a turbojet, and the shortened port fuselage gives an improved view for the observers. This is more original than adding jet versions of twin-radial-engined planes which are rather similar to the XP-61E that has been already transformed this way. That was possible for the Hughes D-5, Focke-Wulf 189E, etc.

* As the Bv 241TL was a single-jet plane, this can be an introduction for derivatives with one central jet and lateral booms, like on the Flitzer and Vampire, and that produced a collection of additional ones: I present here the **P-47Y**, the **Do 935**, knowing that the same could be done with the other ones.

* From the Do 935, I have imagined a simple Do 335 push-pull with a twin-boom layout: the **Do 3335**. Probably the engineers have considered this rather classical layout as well, but I have found no source about it. With push-pull heavy engines, the twin-boom way avoids mainly the need for a very long shaft towards the rear propeller, that caused problems on many aircraft like the XB-42 (otherwise, nose propellers would have disappeared from the aviation world for a long time, as a pusher propeller is more efficient, its vortex being blown away without being disturbed by a fuselage aft).



* Toad told me of another peculiar idea: building a Grumman Tracker with a rear door and twin booms like a C-119. It was nice, but too recent for me... So I proposed an older similar Dakota: the Douglas/Pomerleau **C-53T** Skytrooper.

* Then Aircavpinkteam told us that – with the Dakota main gear under the wing and small wheels under the tails – there was a problem : the door would hurt the ground... So I corrected that into the Douglas/Wearmouth **C-53T'**, with weights more ahead for a nose gear.

* Skorpio then said that such a layout with rear door *must* use a high wing (he did not know the Renard R45 presented in *Forked Ghosts*). Well, I admitted that – for instance – the low-wing rear-door/twin-boom MiG 101M has been corrected into the MiG 101N (& MiG 110) with a high wing, like almost all the twin-boomers featuring a rear door. And I drew this Douglas/Bagnall **C-53T''**.

* Talking about good cargo aircraft, someone mentioned the Burnelli lifting fuselage principle, and I presented the B-2000 to illustrate. Then, Nev said that it looked like a XB-49 with a P-38 tail. I would have been glad to illustrate that also, but the XB-49 was too recent, so I used its forefather XB-35. Following Nev precise directions, I produced the Northrop/Dunn **XB-35N** twin-boomer... Having a twin-boom tailplane behind a flying wing is not completely crazy: the Northrop Avion 1929 used such a layout.

* But a connecting tailplane would have been a problem for the crew facing the rear on the XB-35, and John Howling Mouse said angular fins would be better on a plane of the 40s (the design of the XP-38 was dated 1937), so I used P-51 tails to make a Northrop/Snell **XB-35N'**.

* The same modeller, seeing my Fw 191D and Fw 119, judged that such shapes would be nice to apply on a B-29 model. That idea created the Boeing/Snell **B-29JHm Super-Mouse**.

* Talking about them, C-FWOL/Ollie said that 1/48th kits of B-29 could be used with a 1/72nd nose of B-29, and trying to understand, I imagined the Boeing/Lacombe **B-29Fwol**, nicely crazy... This was just a misreading, as explained later, but a funny one. In Virtual Mustangs, I use the same recipe to improve the profile of Trebble Trouble into Scale Trouble – and this becomes a twin-boomer in replacing the central tail by a rear post: **Scale-T²**... To present them side by side, the B-29Fwol use a 1/48 central kit and 1/72 external ones, while the Mustang use 1/48 external ones too with 1/32 central (same 1/1.5 ratio and same availability in commercial plastic kits).

* Sisko, from 2 He 111Z kits, invented a 4-engined single fuselage He 222. From this, I added a 8-engined **He 222Z**, back in the Zwilling world... And as JoeP said so much span was absurd, I created the **He 222Z-2**, still with 2 engines per wing, but with a total of 5 engines like the 111Z, while fuselages are closer, for improved solidity.

- Other additions :

* I could have also included 2 fiction models related to my subject (<http://home.wanadoo.nl/thraex/wings.html>):

- The Curtiss/Aubri XP-73 Griffon would have been a SAAB J-21 with additional big fins (of B-25) at wingtips, and a powerful Griffon engine, to raise the speed up to 490mph (790km/h).

- The Messerschmitt/Aubri Me 462 Kormoran would have been a Zwilling mixing the 4 engines layout of the 262Z-1 with the separate tails of the 262Z-0 (featured in *Supplement No.1*) – with just asymmetric tailplanes, longer on external sides.

* From the Kakuki web-site detailed before, the D4M1 (and D4M2) Twin-Zero were almost identical to the A8M1 of *Supplement No.1*, the TwinFire was very similar to the Twin-Spitfire Mk 5.

* The Messerschmitt/Mayerle Me 262Z would have been also rather close to the Me 262Z-1 with mainly a different central engine pod, corrected with engineer skills.

* Isao Ishiduka, the creator of the Twin-Shiden, that we called J7K1 without a contact, has actually coded it N1W1-T, then J9K1, then N1K6-Jw So-Shiden-kai, and this is the end of the story.

* The Junkers/Nomura that was presented together with the real Ju 290Z should not have been called "Ju 290Z (?)" but Ju 390Z, simply doubling the 6-engined Ju 390Z. The size of our drawing was correct though, a Ju 290 with additional engines matching the Ju 390 span.

* Other additional information : the Twin-Spitfire UZ-H has been built by Martin Higgs, and this has been done from Spitfires Mk IX, not XII.

* To include pictures for this topic, I try to draw a **push-pull** preliminary **J.21**, a more different **Me 462Z-2**, and an asymmetric 3-engined **C-714T'**...

