

discussion on aircraft concepts

Jan Delfs

Mark Guynn, James Hileman, Geoffrey Hill,
Robert Stoker, Christian Werner-Westphal,
Stephanie Vanhaeverbeke



Revolutionary Aircraft for Quiet Communities

Workshop, Hampton, VA, 24-26 July

discussion on aircraft concepts


What is the low noise limit for conventional a/c ?

(what is the noise reduction requirement, beyond which a change in the whole a/c configuration is mandatory ?
do we really need new a/c configurations if the noise reduction objective/operation is, say 10 dB?)

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Is low noise a/c design necessarily accompanied with higher fuel consumption, compared to a "conventional a/c" with the same mission ?

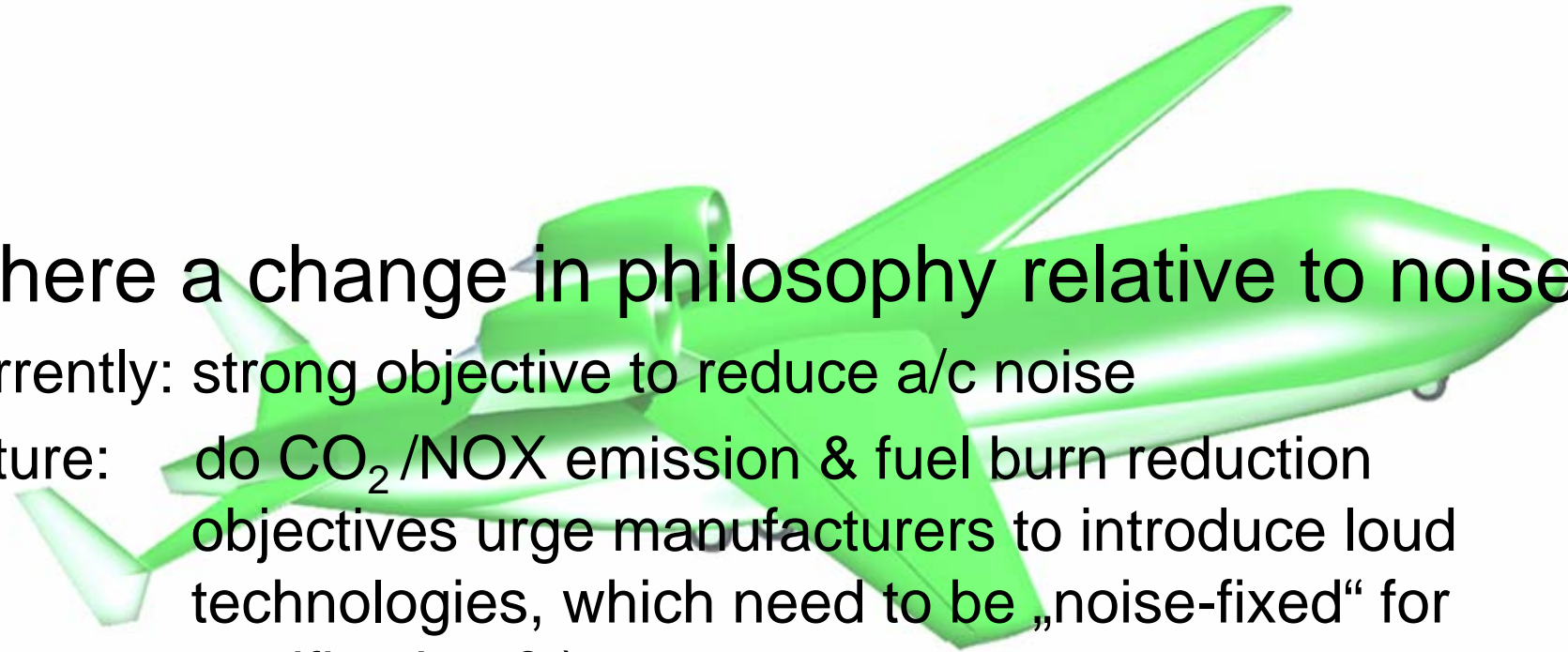
past: increase of bypass ratio served both sides

future: is there any noise reduction concept, not affecting fuel ?

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Is there a change in philosophy relative to noise?

(currently: strong objective to reduce a/c noise

future: do CO₂/NOX emission & fuel burn reduction objectives urge manufacturers to introduce loud technologies, which need to be „noise-fixed“ for certification ?)

See also „Flight International“

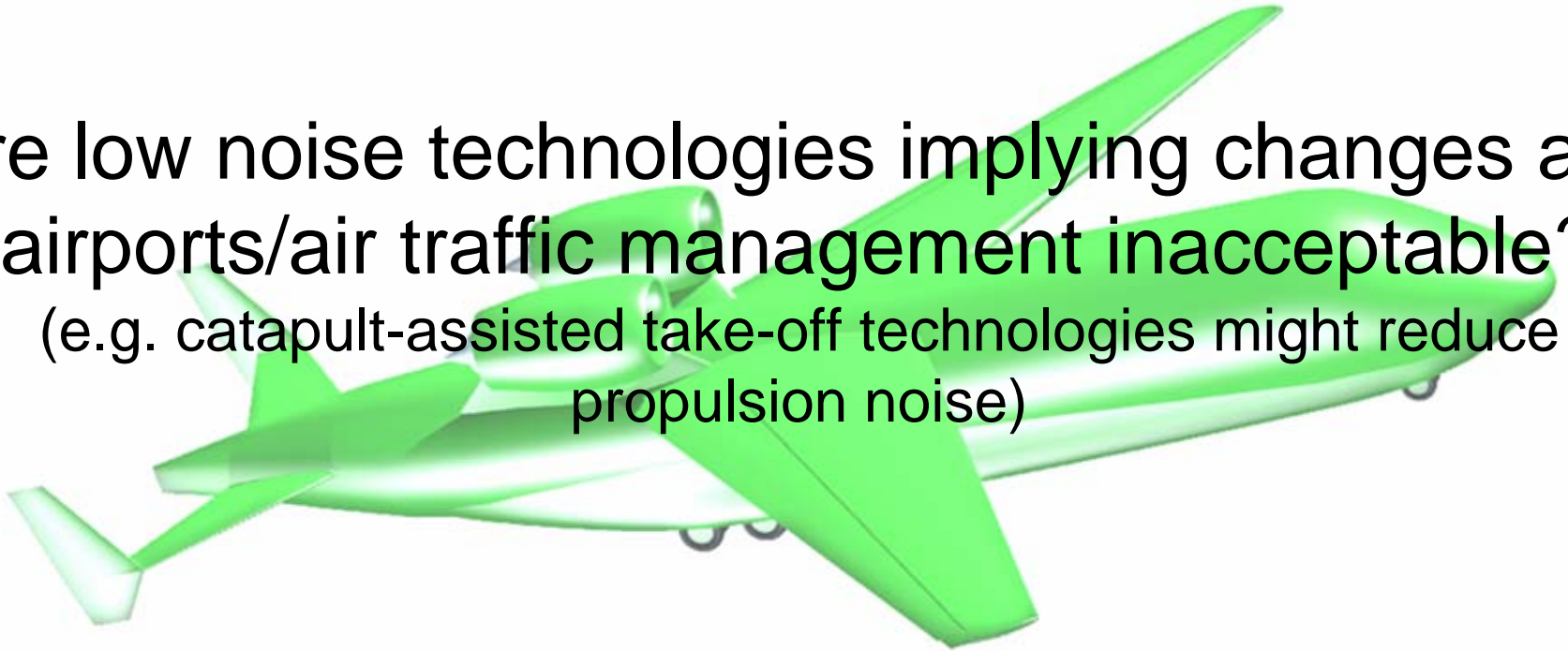
<http://www.flightglobal.com/articles/2007/06/26/215206/emission-impossible.html>

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Are low noise technologies implying changes at airports/air traffic management unacceptable?
(e.g. catapult-assisted take-off technologies might reduce propulsion noise)

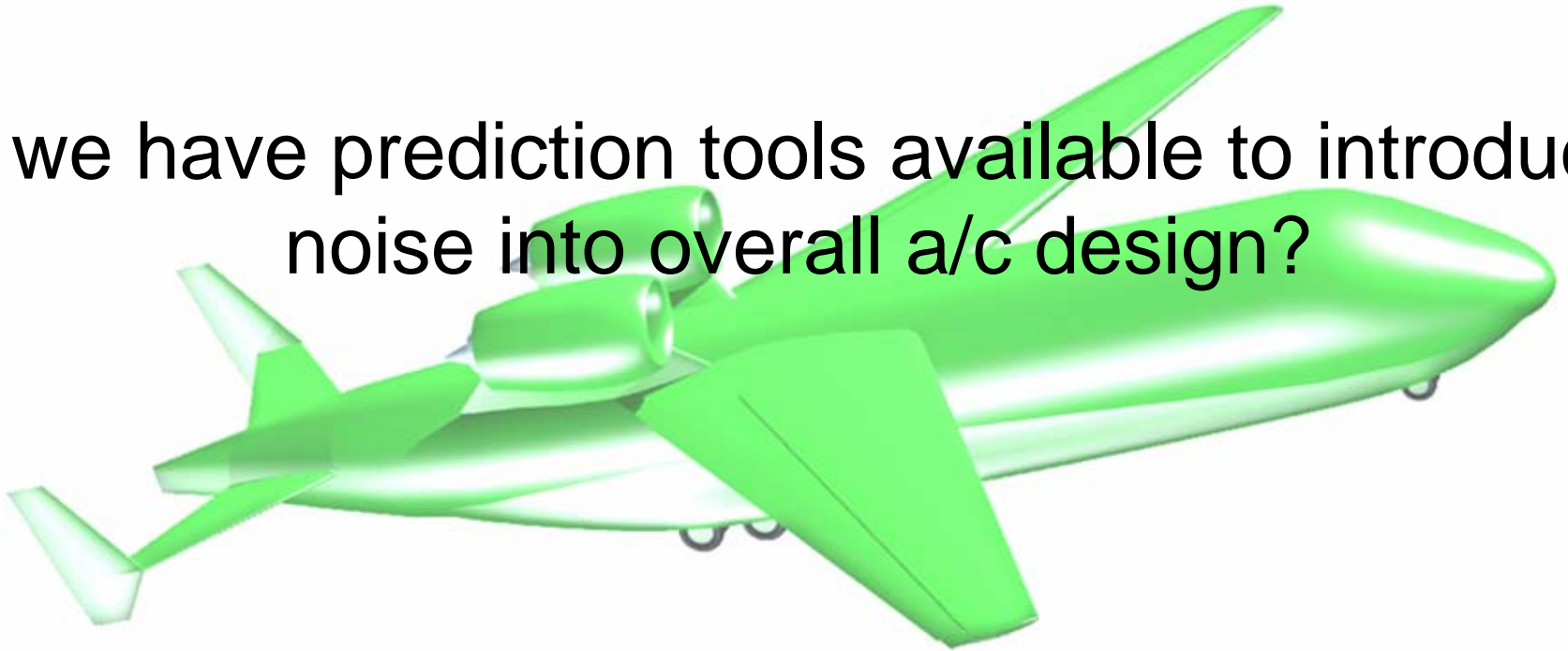


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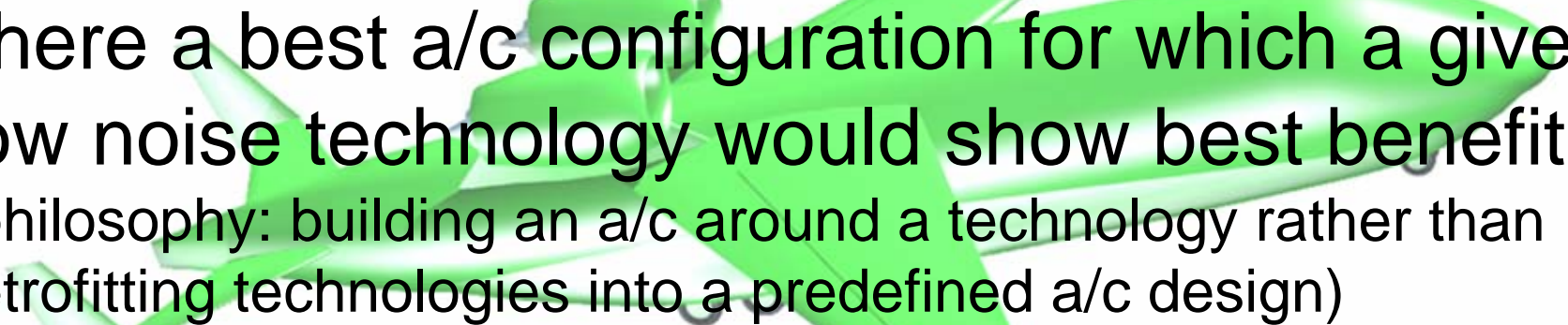
Do we have prediction tools available to introduce noise into overall a/c design?



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Is there a best a/c configuration for which a given low noise technology would show best benefit?
(philosophy: building an a/c around a technology rather than retrofitting technologies into a predefined a/c design)

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