

本試題是否可以使用計算機：可使用，不可使用（請命題老師勾選）

(一) 以下是美國國科會 Committee on Information Technology and Creativity 1997-2003 討論有關 “Creative Practice in Architecture” 部份內容，請翻譯成中文。(60%)

Since the 1960s, digital technology has been transforming design and construction collaboration once again. Computer-aided design (CAD) files have replaced drawings on paper as the primary records or evolving designs. Electronic file transfer and joint access to online databases have increasingly supplanted the physical transportation of drawings as means of communication among design team members.

Videoconferencing and groupware (software tools to support collaboration) play growing roles. As a result, design and construction teams may now be tied together electronically rather than by physical proximity in their interactions and collaborations, they may be distributed geographically, and they may operate asynchronously across multiple time zones. Whereas architecture was once a very local activity, it is now globalizing. Globalization, in this context, means that design and construction teams are not limited to the talent and expertise available locally. They can draw on much larger, more diverse, and competitive talent pools. It is not necessary to go to the structural engineer next door, for example; one can go to a leading international specialist who has exactly the right skills and experience for the current project.

The shift to digital modeling and fabrication based on computer-aided design and manufacturing (CAD/CAM) also provides significantly greater design freedom. Architects can now work, without difficulty, with complex curved surfaces, non-repeating compositions, and other elements that would have been completely unmanageable in the days of hand drafting. And they can use sophisticated software, applied to digital models of projects, to verify structural, thermal, and other aspects of performance. Projects that would have been imaginable but infeasible in the past can now be pursued without much difficulty.

(背面仍有題目,請繼續作答)

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(二) 針對上一題的描述內容，簡述 CAD/CAM 對 Frank Gehry 的下列作品之重要影響，必要時可以 3D 草圖來表達設計過程、CAD Models、與建造過程。(40%)
(以英文作答者加 5 分)

