

Ferranti's IA60 - Hand Layout



- Up to 400 components on-chip, including:
- small *n*pn transistors with 0.5GHz F_T
- larger *n*pn devices handling up to 0.2A
- *p*np transistors
- a wide range of resistor values.

Fig. 15 The appearance of semi-custom linear ICs in the UK, following Ferranti's acquisition of Interdesign Corp, opens new possibilities for medium volume (5k1M unit/ann) OEMs. The Monochip concept allows a customer to wire-up an array of on-chip components to configure his custom circuit. The photo shows the layout for the final interconnection mask being prepared from the customer's supplied layout sketch

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Semi-custom linear ICs

Ferranti's *Monochip* approach allows customers to configure the connections of an integrated array of linear components to effectively custom-design their own IC. This is similar in principle to their well-known ULA service for the digital market (see this month's *Overview*), and Ferranti hope their recent concentration on *Monochip* will induce a similarly popular response.

The customer purchases (for ~£40) a *Monochip* development kit as a first step. This allows him to evaluate the characteristics of the transistors (etc) and actually breadboard and test his circuit before starting on the IC interconnection layout sketch. From this, Ferranti will then design the final interconnection mask (see fig. 15) which will effectively 'wire-up' the large array of transistors, diodes, resistors etc, on the mass-produced blank. A photographic reduction of the 'tape-down' design produces the customized mask which is used to etch the aluminium layer on the required number of slices.

The *Monochip* concept will be described in detail in a forthcoming technical article, and only a brief outline of the most relevant parameters is listed here: