

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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JEFFREY L. TALLON, ROBERT G. BUCKLEY and MURAY R. PRESLAND  
Junior Party,<sup>1</sup>

v.

CHING-WU CHU,  
Junior Party,<sup>2</sup>

v.

KOUICHI KUGIMIYA, SEIJI ADACHI, OSAMU INOUE  
and SYUNICHIRO KAWASHIMA  
Junior Party,<sup>3</sup>

v.

HANS-GEORG VON SCHNERING, WINFRIED BECKER, MARTIN SCHWARZ,  
BERNHARD HETTICH, MARTIN HARTWEG, LEONHARD WALZ and THOMAS POPP  
Junior Party,<sup>4</sup>

v.

JAGANNATHA GOPALAKRISHNAN, ARTHUR W. SLEIGHT  
and MUNIRPALLAM A. SUBRAMANIAN  
Junior Party,<sup>5</sup>

v.

HIROSHI MAEDA, YOSHIAKI TANAKA, MASAO FUKUTOMI and TOSHIHISA ASANO  
Senior Party.<sup>6</sup>

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<sup>1</sup>Application 07/335,819, filed April 10, 1989. Accorded the benefit of New Zealand Application 224,205, filed April 8, 1988. Assigned to Her Majesty the Queen in Right of New Zealand.

<sup>2</sup>Application 07/163,956, filed March 3, 1988. Assigned to the University of Houston, Houston, Texas.

<sup>3</sup>Application 07/550,795, filed July 9, 1990. Accorded the benefit of U.S. Application 07/306,305, filed February 3, 1989, and Japanese Applications 63-26128, 63-26129, and 63-26130, filed February 5, 1988. Assigned to Matsushita Electric Industrial Co., Ltd., Osaka, Japan.

<sup>4</sup>Application 07/525,547, filed May 18, 1990. Accorded the benefit of U.S. Application 07/305,854, filed February 2, 1989, and German Application P3803530.8, filed February 5, 1988. According to the record in this interference, the application is unassigned.

<sup>5</sup>Application 07/528,270, filed May 24, 1990. Accorded the benefit of U.S. Applications 07/153,107, filed February 8, 1988, and 07/152,186, filed February 4, 1988. Assigned to E.I. du Pont de Nemours and Co., Wilmington, Delaware.

<sup>6</sup>Application 07/293,465, filed January 4, 1989. Accorded the benefit of Japanese Application 10084/1988, filed January 20, 1988. Assigned to National Research Institute for Metals, Tokyo, Japan.

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FINAL HEARING: April 27, 1999

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Before CAROFF, PATE, and HANLON, Administrative Patent Judges.<sup>7</sup>  
HANLON, Administrative Patent Judge.

DECISION UNDER 37 CFR § 1.658

This is a decision under 37 CFR § 1.658 in Interference No. 102,462. The parties involved in this interference are Tallon et al. (Tallon), Chu, Kugimiya et al. (Kugimiya), von Schnering et al. (von Schnering), Gopalakrishnan et al. (Gopalakrishnan) and Maeda et al. (Maeda). Maeda is senior party by virtue of the January 20, 1988, filing date of Japanese Application 10084/1988 to which benefit was accorded Application 07/293,465, filed January 4, 1989, involved in this interference.

The sole count at issue in this interference relates to a superconductor composition and reads as follows:

Count 3

A high-temperature oxide superconductor composition having a nominal formula of about  $\text{Bi}_x\text{Sr}_y\text{Ca}_z\text{Cu}_{d+2}\text{O}_n$ ; where x ranges from 1 to

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<sup>7</sup> Administrative Patent Judge (APJ) William F. Pate, III has been substituted for APJ Mary F. Downey, who has retired. Compare In re Bose Corp., 772 F.2d 866, 869-70, 227 USPQ 1, 4 (Fed. Cir. 1985); Ex Parte Papst-Motoren, 1 USPQ2d 1655, 1655 n.\* (Bd. Pat. App. & Int. 1986); Larson v. Johanning, 17 USPQ2d 1610, 1610 n.1 (Bd. Pat. App. & Int. 1990).

2,  $0.1 \leq y \leq 5$ ,  $0.1 \leq z \leq 5$ ,  $d$  is  $\geq -1$  and the amount of oxygen (n) is sufficient to provide a composition that exhibits zero electrical resistance at a temperature of 65°K or above.

The claims of the parties which correspond to Count 3 are:

Tallon:	claims 117-119 and 121
Chu:	claims 1-6, 8, 9 and 11-17
Kugimiya:	claims 12 and 13
von Schnering:	claims 40-50
Gopalakrishnan:	claims 1-14
Maeda:	claims 1-5

Each of the parties involved in this interference filed preliminary motions. A decision as to some but not all of those motions was entered on September 17, 1993 (Paper No. 227). The issues raised at final hearing relate to the motions addressed in that decision.<sup>8</sup> As for the remaining undecided preliminary motions, the decision of September 17, 1993 (Paper No. 227, p. 9), indicates that they "will be decided after the final

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<sup>8</sup>According to the decision of September 17, 1993, "[p]ursuant to 37 CFR 1.640(d)(1) and 1.610(e), the parties Chu, Kugimiya, Von Schnering, Gopalakrishnan and Maeda are notified that judgment will be rendered in favor of Tallon on the ground of no interference-in-fact as to Tallon unless they shall . . . show cause why such action should not be taken" (Paper No. 227, pp. 8-9). Parties Chu, Kugimiya and Gopalakrishnan failed to respond to the order to show cause. Therefore, any issues relating to the following preliminary motions addressed in the decision of September 17, 1993, are not before us at final hearing: Chu's motion under 37 CFR § 1.633(a) for judgment on the ground that Tallon's claims 117-119 and 121 are not patentable to Tallon under 35 U.S.C. § 103 (motion (27)), Gopalakrishnan's motion under 37 CFR § 1.633(a) for judgment on the ground that Tallon's claims 117-119 and 121 are unpatentable to Tallon under 35 U.S.C. §§ 101 and 112 (motion (30)), Kugimiya's motion under 37 CFR § 1.633(e) to declare a separate interference between Tallon, von Schnering and Kugimiya (motion (35)), and Tallon's motion under 37 CFR § 1.633(b) for judgment on the ground of no interference-in-fact between Tallon and Kugimiya (motion (38)).

action on the issue of no interference-in-fact as to Tallon has been taken."

Tallon, von Schnering and Maeda filed records and briefs, and reply briefs were filed by both Maeda and von Schnering.<sup>9, 10</sup> Tallon, von Schnering and Maeda also appeared, through counsel, at final hearing for oral argument.<sup>11</sup>

Specifically, Maeda's brief at final hearing raises the following issues (MB, pp. 1-2):

(1) Whether the APJ was correct in granting Tallon's motion under 37 CFR § 1.633(b) for judgment based on no interference-in-fact.

(2) Whether the APJ was correct in denying Maeda's motion under 37 CFR § 1.633(a) for judgment on the ground that Tallon's claims 117-119 and 121 are not patentable to Tallon under

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<sup>9</sup>Maeda filed a paper entitled "Corrections in Maeda Reply Brief" which is said to correct several "minor errors" in the reply brief. See Paper No. 293. Von Schnering also filed a "Notice of Erratum in Reply Brief." See Paper No. 294. The corrections identified in these papers have been entered on the record in this interference.

<sup>10</sup>The Maeda brief, Maeda reply brief, and Maeda record will be referred to as MB, MRB and MR, respectively, followed by the appropriate page number. Similarly, the von Schnering brief and von Schnering reply brief will be referred to as VSB and VSRB, respectively, followed by the appropriate page number, and the Tallon brief and Tallon record will be referred to as TB and TR, respectively, followed by the appropriate page number.

<sup>11</sup>In the Order of November 16, 1993 (Paper No. 248), times were set for Maeda, von Schnering and Tallon to file records and briefs. No times were set for the remaining parties in this interference, Chu, Kugimiya and Gopalakrishnan, to file records and briefs.

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35 U.S.C. §§ 102(a)/103 and/or 102(f)/103.

(3) Whether the APJ was correct in denying Maeda's motion under 37 CFR § 1.633(c) to redefine the interfering subject matter by designating Tallon's claim 120 as corresponding to Count 3.

Von Schnering's brief at final hearing raises the following issue (VSB, p. 3):

(4) Is there an interference-in-fact between von Schnering's application involved in this interference and Tallon's claims 117-119 and 121?<sup>12</sup>

Tallon's brief at final hearing raises the following issues (TB, p. 1):

(5) Whether Maeda has met its burden of showing good cause why judgment based on no interference-in-fact should not be entered in favor of Tallon.

(6) Whether Maeda and von Schnering have met their burdens of showing good cause why judgment on the ground that Tallon's claims 117-119 and 121 are patentable to Tallon should not be entered in favor of Tallon.<sup>13</sup>

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<sup>12</sup> Von Schnering concedes that there is no interference-in-fact between Tallon's claims 117-119 and 121 and the claims pending in von Schnering's involved application. See VSB, p. 6 ("it is true that there is no interference in fact between Tallon's claims corresponding to the count and any of von Schnering's claims" (emphasis in original)).

<sup>13</sup> In its brief, von Schnering points out that during the preliminary

(continued...)

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(7) Whether the interference should be redefined to designate Tallon's claim 120 as corresponding to Count 3.

The following motions, objections and miscellaneous papers have been filed by the parties and are also before us at final hearing:

(8) Maeda's motion under 37 CFR § 1.633(g) to deny Tallon benefit of the filing date of its first filed New Zealand application (Paper No. 265) and motion under 37 CFR § 1.645(b) (Paper No. 264).

(9) Maeda's objection to Tallon's exhibits for use at final hearing (Paper No. 340).

(10) Von Schnering's objection to Tallon's visual aids for use at final hearing (Paper No. 339).

(11) Von Schnering's "Notice of Patent Reference (37 CFR §§1.641 and 1.642)" (Paper No. 309) and "Notice under 37 CFR §§1.642/1.655" (Paper No. 327).

(12) Tallon's motion to suppress evidence submitted by Maeda (Paper No. 288).

(13) Tallon's motion to strike Maeda's declaration and contingent motion for cross-examination of Dr. Maeda (Paper No.

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<sup>13</sup>(...continued)

motion period it took no position with respect to Maeda's motion under 37 CFR § 1.633(a) for judgment on the ground that Tallon's claims 117-119 and 121 are unpatentable to Tallon under 35 U.S.C. §§ 102(a)/103 and/or 102(f)/103. See VSB, p. 5. Therefore, any arguments advanced by von Schnering at final hearing relating to the patentability of Tallon's claims 117-119 and 121 under 35 U.S.C. §§ 102(a)/103 and/or 102(f)/103 will not be considered. See 37 CFR § 1.655(b).

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(14) Tallon's motion to strike Dr. Kumakura's declaration and contingent motion for cross-examination of Dr. Kumakura (Paper No. 303).

(15) Tallon's motion to respond to a mischaracterization made by von Schnering in its reply brief (Paper No. 296).

(16) Tallon's objection to Maeda's visual aids for the final hearing (Paper No. 335).

#### Standard of review

On March 16, 1999, the U.S. Patent and Trademark Office issued an interim rule change of interference rule 37 CFR § 1.655(a). 64 Fed. Reg. 12,900 (1999). The rule relates to the application of the abuse of discretion standard by a merits panel when considering an interlocutory order entered by a single APJ acting in an interlocutory capacity. The rule has been amended to emphasize that a panel of the board will resolve the merits of an interference without deference to any interlocutory order. The rule change further directs that the abuse of discretion standard will be applied by a panel only with respect to procedural matters decided by the single APJ acting in an interlocutory capacity.

The interim rule notice states that the amended rule is effective as of March 16, 1999, the date of its publication. Therefore, the APJ's decision on the preliminary motions in this

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interference has been reviewed herein without deference to that prior decision.

Tallon's motion to suppress

Tallon filed a motion to suppress certain evidence introduced by Maeda. See Paper No. 288. Namely, Tallon objects to the admissibility of an Endo et al. article published in August of 1988 (Tallon Deposition Exhibit No. 10), a Nobumasa et al. article published in May of 1988 (Tallon Deposition Exhibit No. 11), a Nikkei Superconductors publication said to have been published on March 7, 1988 (MR, pp. 141-142), and a Nikkei Superconductors publication said to have been published on March 21, 1988 (MR, pp. 146-148). See Paper Nos. 262 and 271.

To the extent that Maeda relied on these articles and publications at final hearing to establish that Tallon's claims 117-119 and 121 are unpatentable under 35 U.S.C. §§ 102 and/or 103, they are not the subject of a motion under 37 CFR § 1.633 or a belated motion. See 37 CFR § 1.655(b). Therefore, Tallon's motion to suppress is granted.<sup>14</sup>

Maeda articles

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<sup>14</sup>According to Maeda in its brief at final hearing, APJ Ronald H. Smith indicated that evidence relied on by Maeda to establish that the Nikkei Superconductors publications are "proper publications" would be considered at final hearing. See MB, p. 34. In view of the basis for granting Tallon's motion to suppress, it is not necessary to consider this evidence.

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In its brief at final hearing, Maeda relies on two articles coauthored by Maeda to establish that Tallon's claims 117-119 and 121 are unpatentable to Tallon under 35 U.S.C. §§ 102(a)/103. See MB, pp. 16-19.

The first of these articles is identified as ME-1 on page 133 of the Maeda record.<sup>15</sup> Maeda relies on Maeda ME-1 for the first time in its brief at final hearing.<sup>16</sup>

According to 37 CFR § 1.655(b) (2000):

A party shall not be entitled to raise for consideration at final hearing any matter which properly could have been raised by a motion under § 1.633 or 1.634 unless the matter was properly raised in a motion that was timely filed by a party under § 1.633 or 1.634 and the motion was denied or deferred to final hearing . . . or the party shows good cause why the issue was not properly raised by a timely filed motion or opposition.

See also Koch v. Lieber, 141 F.2d 518, 520, 61 USPQ 127, 129 (CCPA 1944) (board need not consider new arguments at final hearing in support of motion to dissolve); Bayles v. Elbe, 16 USPQ2d 1389, 1391 (Bd. Pat. App. & Int. 1990) (it has been a long standing practice that a party whose motion was denied cannot present at final hearing reasons in support of granting the motion if those reasons were not included in the original motion).

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<sup>15</sup> Hereinafter referred to as "Maeda ME-1."

<sup>16</sup> We recognize that Tallon relied on Maeda ME-1 in its opposition to Maeda's motion for judgment under 37 CFR § 1.633(a). See Paper No. 124, pp. 1-2. However, Maeda did not address this article in its reply.

Since Maeda failed to raise the issue of whether Tallon's claims 117-119 and 121 are unpatentable over Maeda ME-1, either alone or in combination with other prior art, in a motion for judgment under 37 CFR § 1.633(a) or a belated motion that was granted, Maeda is not entitled to raise this issue at final hearing. See 37 CFR § 1.655(b). Therefore, we will not consider Maeda ME-1 in our review at final hearing of the APJ's denial of Maeda's motion for judgment under 37 CFR § 1.633(a).

The second article coauthored by Maeda is identified as M-B on page 111 of the Maeda record.<sup>17</sup> Maeda relied on Maeda M-B for the first time in its reply to Tallon's opposition to Maeda's motion for judgment under 37 CFR § 1.633(a). To the extent that Maeda relied on Maeda M-B in the reply to establish inherency (Paper No. 130, pp. 4-5), the issue was not timely raised. See 37 CFR § 1.655(b).

Nevertheless, in its brief at final hearing, Tallon maintains that Maeda M-B was published in June of 1988, and accordingly, is not prior art under 35 U.S.C. § 102(a). See TB, p. 27, n.17. In its reply brief, Maeda fails to rely on any evidence to rebut this argument. See MRB, p. 64 (proof that Maeda M-B is prior art under 35 U.S.C. § 102(a) can be established). Rather, Maeda argues that Tallon improperly raised the issue of whether Maeda M-B is prior art under 35 U.S.C.

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<sup>17</sup> Hereinafter referred to as "Maeda M-B."

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§ 102(a) for the first time in its brief at final hearing. See MRB, pp. 63-65.

To the extent that Tallon wants this panel to rule on the admissibility of the Maeda M-B article in rendering its final decision, a motion to suppress the article is necessary. See 37 CFR § 1.656(h). The record in this interference reveals that Tallon did not file a motion to suppress Maeda M-B.

On the other hand, Maeda has prima facie failed to establish that Maeda M-B is prior art under 35 U.S.C. § 102(a). According to the copy of the Maeda M-B article appearing in the Maeda record at page 111, the article was published in "1988." Absent any evidence to the contrary, it is just as likely that the article was published after Tallon's effective filing date as it is that the article was published before that date.<sup>18</sup> Compare Oka v. Youssefyeh, 849 F.2d 581, 584, 7 USPQ2d 1169, 1172 (Fed. Cir. 1988), citing Haultain v. DeWindt, 254 F.2d 141, 142, 117 USPQ 278, 279 (CCPA 1958) ("where testimony merely places the acts within a stated time period, the inventor has not established a date for his activities earlier than the last day of the period"). Therefore, as the movant under 37 CFR § 1.633(a), Maeda had the burden of establishing prima facie that Maeda M-B

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<sup>18</sup>In its reply to Tallon's opposition to Maeda's motion for judgment under 37 CFR § 1.633(a), Maeda alleges that the Maeda M-B article was published in March of 1988. See Paper No. 130, p. 5. Maeda failed to rely on any evidence to support this allegation. See In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965) (arguments in the brief do not take the place of evidence in the record).

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is prior art under 35 U.S.C. § 102(a). See 37 CFR § 1.637(a). Maeda failed to sustain that burden.

On balance, we will not consider the Maeda M-B article in our review of the APJ's denial of Maeda's motion for judgment under 37 CFR § 1.633(a). Tallon's failure to file a motion to suppress the article should not penalize Tallon inasmuch as Maeda failed to establish prima facie that the article is prior art under 35 U.S.C. § 102(a). See Mezrich v. Lee, 201 USPQ 922, 923-24 (Bd. Pat. Int. 1978) (no consideration given to materials not submitted in accordance with rules despite opponent's failure to point to noncompliance with any specific rule).

We recognize that after Tallon's brief was filed Maeda filed declarations by Hiroshi Maeda dated May 19, 1994, and Hiroaki Kumakura dated July 20, 1994, in an attempt to establish that the article is in fact prior art under 35 U.S.C. § 102(a). However, Maeda has failed to show good cause why such evidence was not presented earlier. See 37 CFR § 1.655(b).

Maeda would have us believe that arguments advanced by Tallon for the first time in its brief at final hearing necessitated Maeda's extremely untimely filing of these declarations. We disagree. Maeda had the burden of establishing prima facie that Maeda M-B is prior art under 35 U.S.C. § 102(a) regardless of the arguments presented by Tallon in its brief at final hearing. See 37 CFR § 1.637(a).

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The declarations of Hiroshi Maeda dated May 19, 1994, and Hiroaki Kumakura dated July 20, 1994 will not be considered. Therefore, Tallon's motion to strike Maeda's declaration and contingent motion for cross-examination of Dr. Maeda (Paper No. 295) and motion to strike Dr. Kumakura's declaration and contingent motion for cross-examination of Dr. Kumakura (Paper No. 303) are dismissed as moot.

Maeda's and von Schnering's objections

Maeda and von Schnering filed objections to exhibits noticed by Tallon for use at the final hearing. See Paper Nos. 339 and 340. Tallon also filed objections to visual aids submitted by Maeda for use at the final hearing. See Paper No. 335. Inasmuch as Maeda, von Schnering and Tallon have each failed to file an appropriate motion to suppress, these objections are dismissed. See 37 CFR § 1.656(h) ("Any objection previously made to the admissibility of the evidence of an opponent is waived unless the motion required by this paragraph is filed.").

Issues (1) and (5)

An interference-in-fact exists when at least one of a party's claims which corresponds to a count and at least one of an opponent's claims which corresponds to that count define the same patentable invention. 37 CFR § 1.601(j); Aelony v. Arni, 547 F.2d 566, 569-70, 192 USPQ 486, 489-90 (CCPA 1977). Conversely, an interference-in-fact does not exist when each one

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of a party's claims which has been designated as corresponding to a count defines a separately patentable invention from each one of an opponent's claims which has been designated as corresponding to that same count. Maeda, the party challenging the decision of no interference-in-fact by the APJ below, bears the burden of establishing that at least one of Maeda's claims 1-5 which has been designated as corresponding to Count 3 and at least one of Tallon's claims 117-119 and 121 which has been designated as corresponding to Count 3 define the same patentable invention. See 37 CFR § 1.655(a).

According to 37 CFR § 1.601(n), the invention of Tallon's claims 117-119 and 121 is the "same patentable invention" as the invention of Maeda's claims 1-5 only if the Tallon invention is the same as (35 U.S.C. § 102) or is obvious (35 U.S.C. § 103) in view of the Maeda invention, assuming the Maeda invention is prior art with respect to the Tallon invention. In considering the obviousness of the invention of Tallon's claims 117-119 and 121, the subject matter of Maeda's claims 1-5 must be considered in combination with any relevant prior art. See Example 34 of Final Rule Notice, 49 Fed. Reg. 48,435 (1984).

Maeda's claim 1 is directed to a broad genus of high-temperature oxide superconductors which may include oxides of Bi-Sr-Ca-Cu. The atomic ratios of the elements in the oxides of Maeda's claim 1 are not specified. On the other hand, Maeda's

claim 3 is specifically directed to a genus of Bi-Sr-Ca-Cu high-temperature oxide superconductors. The oxides encompassed by Maeda's claim 3 have a "nominal formula of about  $\text{Bi}_1\text{Sr}_y\text{Ca}_z\text{Cu}_{2+d}\text{O}_n$ ; where  $0.1 \leq y \leq 5$ ,  $0.1 \leq z \leq 5$ ,  $d$  is  $\geq$  than  $-1$  and the amount of oxygen ( $n$ ) is sufficient to provide a composition that exhibits zero electrical resistance at a temperature of  $65^\circ\text{K}$  or above."<sup>19</sup> According to Maeda (Paper No. 355, p. 5):

The term nominal is used in the Maeda claim essentially to designate that the composition is expressed in name only, based upon the stoichiometric ratios of the starting materials for convenience, because it is not possible to describe the final composition (which in this case is a multiphase system) by a simple formula.

Maeda explains that the Bi-Sr-Ca-Cu-O superconductor described in the Maeda specification is a multiphase system composed of two phases, a high- $T_c$  phase and a low- $T_c$  phase.<sup>20</sup> See MB, p. 47. However, the Maeda specification fails to describe this "multiphase system" and still less fails to identify the chemical composition of the "high- $T_c$  phase" and/or the "low- $T_c$  phase." See MB, p. 53 ("It is true that Maeda has not identified the precise stoichiometric ratio Bi-Sr-Ca-Cu-O elements of the high  $T_c$  compound . . .").

There appears to be no dispute that Tallon's claims are

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<sup>19</sup> According to Maeda, there is an error in claim 3. Referring to page 4 of its specification, Maeda points out that  $y$  and  $z$  in claim 3 should be "equal to or less than 5." See Paper No. 355, p. 4.

<sup>20</sup> This "multiphase system" is also referred to as a "multiphase composition" or a "bulk composition." See MB, p. 9; see also TB, p. 11, n.8.

directed to a species falling within the genus claimed by Maeda. See TB, p. 16; see also MB, pp. 45-46. Specifically, Tallon's claim 117 is directed to a Bi-Sr-Ca-Cu oxide having the formula  $\text{Bi}_2(\text{Sr}, \text{Ca})_4\text{Cu}_3\text{O}_{10+\delta}$ , and Tallon's claim 118 is directed to a Bi-Sr-Ca-Cu oxide having the formula  $\text{Bi}_{2.1}\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10-\delta}$ . Based on the record before us, it appears that the Bi-Sr-Ca-Cu oxide of claim 118 is the high-Tc phase compound said to be contained in the multiphase system of Maeda<sup>21</sup> (hereinafter referred to as the "2223 compound"<sup>22</sup>). See MB, p. 6; TB, pp. 10 and 13.

A chemical genus cannot, by definition, anticipate a specific species. See In re Meyer, 599 F.2d 1026, 1031, 202 USPQ 175, 179 (CCPA 1979) ("[t]he genus 'alkaline chlorine or bromine solution,' does not identically disclose or describe, within the meaning of § 102, the species alkali metal hypochlorite, since the genus would include an untold number of species).” Therefore, in order to establish that at least one of Maeda's claims which has been designated as corresponding to Count 3 and at least one of Tallon's claims which has been designated as corresponding to Count 3 define the same patentable invention, Maeda must demonstrate that its claimed genus renders obvious the species of Tallon's claims. See In re Jones, 958 F.2d 347, 350,

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<sup>21</sup>To the extent that a distinction has been drawn between "phases" and "compounds" on the record in this interference, our decision does not rest on such a distinction. See TR, pp. 95-97.

<sup>22</sup>According to Tallon, the 2223 compound has a zero resistance Tc of 105°K. See TR, p. 9, ¶ 7.

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21 USPQ2d 1941, 1943 (Fed. Cir. 1992) (a chemical genus does not necessarily render obvious each species which falls within that genus); see also In re Baird, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994) ("The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious."). Maeda has failed to sustain its burden.

The focus of Maeda's arguments is on the disclosure of its invention. Namely, Maeda argues that "the high Tc phase compound claimed by Tallon, i.e., the 2223 compound[,] is inherently present in the multiphase Bi-Sr-Ca-Cu-O system described in the Maeda application" and conventional means could have been used to isolate the high Tc phase (emphasis added). MB, pp. 46-47. Further, Maeda argues that one having ordinary skill in the art working within the parameters disclosed in the Maeda application would have "inevitably" produced the high-Tc compound. See MB, pp. 47-48.

Maeda's reliance on its disclosure to establish an interference-in-fact is misplaced. See TB, p. 16, n.12 and p. 22. As discussed above, an interference-in-fact exists when at least one of a party's claims which corresponds to a count and at least one of an opponent's claims which corresponds to that count define the same patentable invention. 37 CFR § 1.601(j); Aelony, 547 F.2d at 569-70, 192 USPQ at 489-90.

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While we recognize that claims must be read in light of the specification, a particular disclosure in a specification may or may not limit the claims accordingly. See In re Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969) ("reading a claim in the light of the specification,' to thereby interpret limitations explicitly recited in the claim, is a quite different thing from 'reading limitations of the specification into a claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim."). Therefore, to the extent that Maeda's specification describes and/or enables a high-Tc phase compound, Maeda must still establish that at least one of its claims which has been designated as corresponding to Count 3 and at least one of Tallon's claims which has been designated as corresponding to Count 3 define the same patentable invention. 37 CFR § 1.601(j).

Thus, what is clearly missing from Maeda's brief is any discussion of why at least one of Maeda's claims 1-5 defines the same patentable invention as at least one of Tallon's claims 117-119 and 121. 37 CFR § 1.601(j). Based on the genus/species relationship between Maeda's claims and Tallon's claims that discussion would necessarily have included a discussion of the obviousness of at least one of Tallon's claims 117-119 and 121 in view of at least one of Maeda's claims 1-5. 37 CFR § 1.601(n).

Having failed to provide the requisite showing under 37 CFR

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§ 1.601(n), Maeda has failed to sustain its burden of establishing an interference-in-fact under 37 CFR § 1.601(j). For this reason, the decision of the APJ is affirmed.

In view of our affirmance of the APJ's decision, Tallon's claims 117-119 and 121 do not correspond to Count 3. Judgment will be entered accordingly in due course.<sup>23</sup>

Issues (3) and (7)

Tallon's claim 120 is a dependent claim<sup>24</sup> which also covers the 2223 compound. See MB, p. 41. Based on our decision of no interference-in-fact above, the issues relating to the APJ's denial of Maeda's motion under 37 CFR § 1.633(c) to redefine the interfering subject matter by designating Tallon's claim 120 as corresponding to Count 3 are moot.

Issue (8)

The MAEDA MOTION TO DENY TALLON THE BENEFIT OF THE FILING DATE OF THE FIRST FILED TALLON NEW ZEALAND APPLICATION (Paper No. 265) and the MAEDA MOTION UNDER 37 C.F.R. 1.645(b) (Paper No. 264) are dismissed. A party seeking to deny an opponent benefit of an earlier filed application (37 CFR § 1.633(g)) shall explain, as to each count, why the opponent should not be accorded the

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<sup>23</sup> Several preliminary motions filed by Tallon remain undecided. As such, it is not appropriate to enter judgment in favor of Tallon at this time.

<sup>24</sup> According to claim 120, it is dependent from "claim 1." Since claim 1 has been canceled it appears that the dependency of claim 120 is incorrect.

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benefit of the filing date of the earlier application. 37 CFR § 1.637(g); compare 37 CFR § 1.633(a) (a motion for judgment under 37 CFR § 1.633(a) shall separately address each claim alleged to be unpatentable). Since Tallon has no claims which correspond to Count 3, the above-identified motions are properly dismissed.

Issue (4)

There is no dispute that there is no interference-in-fact between any of von Schnering's claims pending in its involved application and Tallon's claims 117-119 and 121. See VSB, p. 6 ("it is true that there is no interference in fact between Tallon's claims corresponding to the count and any of von Schnering's claims" (emphasis in original)); see also TB, p. 19. Nevertheless, von Schnering argues that its specification enables and provides descriptive support for claims that would interfere with at least one of Tallon's claims 117-119 and 121. See VSB, pp. 19-32.

To the extent that von Schnering could have added a claim which interferes with at least one of Tallon's claims 117-119 and 121, von Schnering failed to file a motion under 37 CFR § 1.633(c) or 1.633(i) during the course of this interference. Von Schnering is of the opinion that comments presented in its opposition to Tallon's motion for no interference-in-fact amounted to a "contingent motion for permission to copy a phantom

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count based upon Tallon's claim 117." See VSRB, p. 5. An opposition is NOT a motion. See 37 CFR § 1.637.

The fact remains that von Schnering has no claims pending in its involved application which interfere with at least one of Tallon's claims 117-119 and 121.<sup>25</sup> As discussed above, an interference involves the claims of two or more parties which are directed to the same patentable invention. See 37 CFR § 1.601(i). Therefore, the issue of whether an interference exists between Tallon's claims 117-119 and 121 and von Schnering's application involved in this interference is both irrelevant under 37 CFR § 1.633(b) and beyond the statutory jurisdiction of the Board. Any estoppel will be decided by the examiner ex parte at the termination of the interference. See MPEP § 2363.03 (6th ed., Rev. 1, Feb. 2000).

Tallon filed a motion to respond to a mischaracterization by von Schnering in its reply brief relating to whether or not the disclosure of von Schnering's involved application provides support for a claim that would interfere with at least one of Tallon's claims 117-119 and 121. See Paper No. 296. In view of our decision with respect to Issue (4), that motion is moot. Accordingly, Tallon's motion is dismissed.

Issues (2) and (6)

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<sup>25</sup> To the extent that another application filed by von Schnering has claims directed to the same patentable invention as at least one of Tallon's claims 117-119 and 121 (see Paper No. 236), von Schnering has failed to file a motion under 37 CFR § 1.633(e).

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In the decision on preliminary motions, the APJ denied Maeda's motion under 37 CFR § 1.633(a) for judgment on the ground that Tallon's claims 117-119 and 121 are not patentable to Tallon under 35 U.S.C. §§ 102(a)/103 and/or 102(f)/103. Maeda, the party challenging this decision of the APJ, bears the burden of showing that the decision should be modified. See 37 CFR § 1.655(a).

In its motion for judgment under 37 CFR § 1.633(a), Maeda relied on several references to establish that Tallon's claims 117-119 and 121 are unpatentable under 35 U.S.C. §§ 102(a)/103. Those references include a Japanese Economic News Article published on January 22, 1988 (MR, pp. 2-3), articles which appeared in Japanese newspapers, specifically the Yomiuri Shinbun (MR, pp. 9-10), the Mainichi Shinbun (MR, pp. 12-13) and the Asahi Shinbun (MR, pp. 15-16), on January 22, 1988, and a press report transcript which was said to have been released to the Japanese press on January 21, 1988 (MR, pp. 18-20). In its motion, Maeda also relied on articles by Michel et al. (MR, pp. 30-32), Bednorz et al. (MR, pp. 33-37), Tarascon et al. (MR, pp. 91-95 and 99-106), and Takayama-Muromachi et al. (MR, pp. 96-98), and additionally relied on articles by Ikeda et al. (MR, pp. 122-125) and Zandbergen et al. (MR, pp. 126-132) in its reply.

First, we examine the disclosures of each of the Japanese

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Economic News Article, the Yomiuri Shinbun article, the Mainichi Shinbun article, the Asahi Shinbun article, and the press report transcript of January 21, 1988. Each of these items discloses a Bi-Sr-Ca-Cu-O superconductor.

Specifically, the Japanese Economic News Article discloses a high-temperature superconductor comprising oxides of copper, bismuth, strontium and calcium which exhibits superconductivity at 105°K (MR, p. 2). In contrast, the press report transcript of January 21, 1988, discloses a Bi-Sr-Ca-Cu-O superconductor having two superconductive phases (MR, p. 19):

[O]ne (high-Tc phase) where the superconductive transition completion point at which the electrical resistance attains zero is approx. 105K (-168°C: the value extrapolated from the experiment data) and the one (low-Tc phase) where the point is at about 75K.

According to the press report, the structure of the high-Tc phase has not yet been confirmed. See MR, p. 20.

The Yomiuri Shinbun article<sup>26</sup> discloses a superconducting material comprising bismuth, strontium, calcium, copper, and oxygen which is prepared by combining two parts copper and one part each of bismuth, strontium, calcium and oxygen and firing rapidly at about 900°C. See MR, p. 9. According to this article (MR, p. 10):

"We surmise there are two kinds of superconducting materials 'coexisting,' one that superconducts at an

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<sup>26</sup> Reference herein to the disclosures of the Japanese newspaper articles will be to the English translations appearing in the Maeda record.

absolute temperature of 105 K, and another at 75 K. If we refine the composition more, I expect we can create a material that can superconduct with stability at about 100 K."

This article explains that "researchers are hurrying to elucidate its structure with electron microscopes and other means." MR, p. 9.

The Mainichi Shinbun article also discloses that bismuth, strontium, calcium and copper in the ratio of 1:1:1:2 can be used to produce a Bi-Sr-Ca-Cu-O superconductor. At about 120°K electrical resistance in this Bi-Sr-Ca-Cu-O superconductor begins to drop precipitously, and all resistance is lost at 105°K. See MR, p. 12.

Finally, the Asahi Shinbun article discloses an oxide of bismuth, calcium, strontium and copper (MR, p. 15):

[H]aving one part each of the metals bismuth, calcium, and strontium, and two parts copper. When the Institute made a number of samples measuring 2-3 cm in diameter and 1 mm thick, and performed various measurements upon them, electrical resistance in all samples began to drop rapidly at an absolute temperature of about 107 K (-166°C), and resistance disappeared at 75 K.

Clearly, none of these articles<sup>27</sup> expressly describe the 2223 compound claimed by Tallon. Nevertheless, Maeda argues that

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<sup>27</sup> The Japanese Economic News Article, the Yomiuri Shinbun article, the Mainichi Shinbun article, the Asahi Shinbun article, and the press report transcript of January 21, 1988, will be referred to collectively as "articles."

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each of these articles discloses a multiphase Bi-Sr-Ca-Cu-O system which necessarily contains this 2223 compound. See MB, p. 19.

Significantly, Maeda has failed to point to any evidence in the record which establishes that the 2223 compound claimed by Tallon is inherently contained in the disclosed Bi-Sr-Ca-Cu-O systems. See Schulze, 346 F.2d at 602, 145 USPQ at 718 (arguments in the brief do not take the place of evidence in the record). Absent any evidence of inherency, Maeda cannot establish that these articles anticipate Tallon's claims 117-119 and 121. See Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1054 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987) ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.").

Maeda additionally relies on articles by Michel et al.<sup>28</sup> and Bednorz et al.<sup>29</sup> to establish that procedures for isolating and identifying a high-Tc phase compound contained in the disclosed Bi-Sr-Ca-Cu-O systems were well known. See MB, p. 21.

Neither Michel nor Bednorz relate to Bi-Sr-Ca-Cu-O systems. Rather, Michel relates to a Bi-Sr-Cu-O system, and Bednorz

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<sup>28</sup> Hereinafter referred to as "Michel."

<sup>29</sup> Hereinafter referred to as "Bednorz."

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relates to a Ba-La-Cu-O system. See MR, pp. 30-37; MB, p. 21. Significantly, Maeda has provided no evidence to establish that one having ordinary skill in the art would have expected that methods used to isolate compounds from a Bi-Sr-Cu-O and/or Ba-La-Cu-O system would be successful in isolating phases or compounds from the Bi-Sr-Ca-Cu-O system. See Schulze, 346 F.2d at 602, 145 USPQ at 718 (arguments in the brief do not take the place of evidence in the record); see also In re Dow Chem., 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988) (under 35 U.S.C. § 103, both the suggestion and the expectation of success must be founded in the prior art).

Finally, Maeda relies on articles by Takayama-Muromachi et al. (MR, pp. 96-98), Tarascon et al. (MR, pp. 91-95 and 99-106), Ikeda et al. (MR, pp. 122-125), and Zandbergen et al. (MR, pp. 126-132) to establish that Tallon's claims 117-119 and 121 are unpatentable under 35 U.S.C. §§ 102(a)/103. According to the record in this interference, the Takayama-Muromachi et al. article was "published in April of 1988, apparently a few weeks after the April 8, 1988 date" (MB, p. 22), the first Tarascon et al. article (MR, pp. 91-95) was published on August 1, 1988 (MB, p. 24), the second Tarascon et al. article (MR, pp. 99-106) was published on November 1, 1988, the Ikeda et al. article was published on June 6, 1988 (MB, p. 25), and the Zandbergen et al. article was "published in the latter part of April of 1988, after

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the filing date of the New Zealand first filed priority application" of Tallon (MB, p. 28). Thus, the publication date of each of these articles is after April 8, 1988, Tallon's effective filing date.

Maeda recognizes that "these references are not publications under 35 USC §102(a)" (MRB, p. 19). Nevertheless, Maeda relies on the date each of these articles was submitted for publication to establish "simultaneous invention" prior to Tallon's effective filing date. See MB, pp. 30-31.

Significantly, Maeda has failed to show what each of these articles disclosed as of the date it was submitted or "received." See TB, pp. 43-44. Therefore, based on the record before us, the articles cannot be used to demonstrate the ordinary skill in the art prior to Tallon's effective filing date.

Maeda argues that "when a manuscript is revised, the publication usually indicates it on the front thereof" (emphasis added). MRB, p. 59. Since these articles do not identify a "revision date," Maeda concludes that the articles were not revised. See MRB, pp. 59-60.

Maeda's argument is not persuasive. First, it is well-settled that arguments in the brief do not take the place of evidence in the record. See Schulze, 346 F.2d at 602, 145 USPQ at 718. Second, Maeda's argument appears to be contrary to arguments presented by Maeda elsewhere in its reply. See MRB,

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pp. 10-11 ("the Nature publication [(MR, pp. 135-138)] could have been revised between the time of submission and the time of publication"); MR, pp. 135-138 (no "revision date" identified).

In its motion for judgment under 37 CFR § 1.633(a), Maeda also alleges that Tallon's claims 117-119 and 121 are unpatentable to Tallon under 35 U.S.C. §§ 102(f)/103. According to 37 CFR § 1.633(a) (2000), "A motion under this paragraph shall not be based on: . . . (2) Derivation of the invention by an opponent from the moving party." To the extent that Maeda is alleging that Tallon derived its invention from a party other than Maeda, no evidence has been presented. See Schulze, 346 F.2d at 602, 145 USPQ at 718 (arguments in the brief do not take the place of evidence in the record). Manifestly, the designation of authorship in a published article does not raise a presumption of inventorship with respect to the subject matter disclosed therein so as to justify a rejection under 35 U.S.C. § 102(f). See MPEP § 2137 (6th ed., Rev. 1, Feb. 2000).

For the reasons set forth above, the APJ's denial of Maeda's motion under 37 CFR § 1.633(a) for judgment on the ground that Tallon's claims 117-119 and 121 are not patentable to Tallon under 35 U.S.C. §§ 102(a)/103 and/or 102(f)/103 is affirmed.

Cava et al. and Eibl patents

After the close of the preliminary motions period, von

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Schnering filed a "Notice of Patent Reference (37 CFR §§1.641 and 1.642)" and "Notice under 37 CFR §§ 1.642/1.655" for the purpose of bringing U.S. Patent Nos. 5,340,796 and 4,880,771 to Cava et al. and U.S. Patent No. 5,665,662 to Eibl et al., respectively, to the panel's attention. See Paper Nos. 309 and 327.

These papers are dismissed for failure to comply with 37 CFR § 1.645(b). See 37 CFR § 1.645(b) ("Any paper belatedly filed will not be considered except upon motion [(sic, motion)] (§ 1.635) which shows good cause why the paper was not timely filed . . .").

Conclusion

On the record before the U.S. Patent and Trademark Office in this interference, JEFFREY L. TALLON, ROBERT G. BUCKLEY, and MURAY R. PRESLAND are entitled to a patent containing claims 117-119 and 121 of Application 07/335,819, filed April 10, 1989. Judgment will be entered accordingly in due course.

This interference is REMANDED to the APJ for further proceedings consistent with the decision on preliminary motions of September 17, 1993, and this decision under 37 CFR § 1.658.

MARC L. CAROFF )  
Administrative Patent Judge )  
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WILLIAM F. PATE, III ) BOARD OF PATENT

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Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
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